MOBILITY & TRANSPORTATION

This section considers a full complement of transportation ~~modes~~components namely – roads, pedestrian, bicycles, trails, transit, parking, railroads, ~~and~~ airports and airfields. It describes ~~an evolving~~a dynamic local transportation system built upon the ~~C~~comprehensive ~~P~~plan's ~~V~~vision.

~~In so doing, the~~This section not only serves as the City and County's ~~transportation plan but also fulfills the~~ Long Range Transportation Plan (LRTP) but also fulfills the requirements of the Federal transportation planning process. ~~While the Federally mandated LRTP is portrayed in this section of the Plan, the entire Comprehensive Plan – and the process followed to bring it about, as well as other supporting technical documentation – should be viewed as part of~~The process includes goals, objectives and strategies to meet the Community's Vision. The result of this endeavor is a "Preferred Plan" that identifies transportation needs believed necessary to address the community's ~~commitment to fulfilling the letter and spirit of the Federal requirement.~~vision during the next 25 year planning period.

TRANSPORTATION PLANNING PRINCIPLES

The Transportation System for Lincoln and Lancaster County involves different modes of transportation to achieve the safe, efficient and convenient movement of persons and goods. The transportation system includes streets and highways, public transportation, railroads, trails, sidewalks, and airport facilities. The transportation system is primarily influenced by land use, facility cost, operating cost, the environment and the socio-economic factors of the community.

The Mobility & Transportation section of the Comprehensive Plan guides decisions that will support the plan's overall objectives by allowing Lincoln and Lancaster County's transportation system to move people and goods around the community in a safe, efficient, and convenient way. However, the roles and effects of the transportation system are far more complex than simply moving people and vehicles. The characteristics which contribute to this complexity include:

Federal Planning Requirements for the Long Range Transportation Plan

Address at least a twenty year planning horizon and be updated every five years;

Include long-range and short-range strategies/actions for operation and management activities;

Provide an integrated intermodal transportation system for the safe and efficient movement of people and goods;

Use latest estimates and assumptions for population, land use, travel, employment, congestion, and economic activity;

Maintain consistency with the projected transportation demand of persons and goods in the metropolitan planning area over the period of the plan;

Identify management and operations strategies, such as traveler information, traffic surveillance, incident response, freight routing, work zones management, weather response, pricing, fare payment alternatives, public transportation management, demand management, alternative routing, telecommuting, and parking management;

Plan pedestrian walkway and bicycle transportation facilities;

Consider and provide for congestion management system alternatives;

Assess capital investment and other measures to preserve existing system and to make the most efficient use of existing facilities;

Include design concept and scope descriptions of all existing and proposed transportation facilities in sufficient detail to develop cost estimates;

Reflect a multimodal evaluation of the transportation, socioeconomic, environmental, and financial impact of the overall plan;

Reflect consideration of local long-range land use plans, housing goals and strategies, community development and employment plans, and environmental resource plans, work force training and labor mobility plans; energy conservation goals, and the metropolitan area's overall social, economic, and environmental goals and objectives;

Indicate proposed transportation enhancement activities;

Include a financial plan demonstrating the consistency of proposed transportation investments with already available and projected sources of revenue.

- The size of capital investment in the transportation system. This system represents the community's largest single public works investment. Transportation projects are ~~typically expensive~~significant community investments, requiring that every dollar be spent to maximum advantage.
- The level of public interest in transportation issues. People in American communities including Lincoln , value their ability to move freely about their cities. We expect our transportation systems to respond to our needs with a minimum of inconvenience and ~~congestion~~delay. We also interact with the transportation system every day during work, shopping, recreation, and social trips. Because of this, the transportation system attracts a high level of public interest and debate.
- The relationship between land use and urban development patterns. The transportation system both serves and shapes development. When most trips were made by walking and public transportation, cities exhibited relatively dense development patterns. The convenient access to all parts of the City provided by the automobile ~~to all parts of the City~~ allowed people to live, work, and shop in more dispersed locations, creating lower density cities. ~~This pattern of lower density was reinforced by the space required for streets and highways, parking lots, and other facilities. Finally, the~~The construction of roads opens areas to development, helping to mold the City's ~~future growth directions~~directional growth. ~~So, j~~Just as the transportation system is ~~primarily~~ influenced by land use, land use ~~can~~is also ~~be~~ influenced by transportation.
- The environmental impact of transportation facilities. Of all public infrastructure investments, transportation facilities probably have the greatest visible effects on ~~the~~ most people. ~~Street widening projects affect~~Roadway improvements can influence the quality of neighborhood environments, making residents extremely sensitive to ~~them~~these projects. Transportation is also a major energy user ~~and producer of waste products~~ in American cities. The character of the transportation system can help to determine the long-term ~~sustainability~~viability of a community.
- Conflicts between transportation constituencies. ~~Different people~~Generally, people have different expectations of the transportation system, which frequently ~~creating~~creates conflicts. A resident of a newly developing area expects the system to provide a quick, convenient way to work. However, the expectations of this commuter can conflict with the concerns of ~~a~~ an established neighborhood along the ~~commuting~~commuter's route.

~~Because of these and other issues,~~As a result, transportation planning must balance a variety of needs and priorities of the

community. The transportation system provides the links ~~and tendrils~~ that knit Lincoln and Lancaster County together as one community. Yet, the impact of that same transportation system can create physical barriers and conflicting interests that can also erode this sense of community. ~~F~~The following four principles guide Lincoln and Lancaster County's transportation planning:

- A Connected City. In Lincoln and Lancaster County, the unifying qualities of transportation will be emphasized. ~~The transportation network will sustain the One Community concept by linking neighborhoods together.~~ Neighborhoods, activity and employment centers, rural communities, and open lands ~~will~~should be connected by a continuous network of public ways. The transportation network needs to sustain the One Community concept by linking neighborhoods together
- A Balanced Transportation System. Transportation planning in Lincoln will be guided by the principle of balancing needs and expectations. It will recognize that transportation is a means to the goal of a unified, liveable, and economically strong community~~, and not an end in itself~~. ~~Thus, the~~The system ~~will~~needs to effectively move people and goods around the community, while minimizing impacts on established neighborhoods and investments. The concept of balance also applies to ~~methods~~modes of transportation. While the system must function well for motor vehicles, it should also ~~establish~~promote public transportation, bicycling, and walking as realistic alternatives now and into the future.
- Transportation as a Formative System. Transportation and land use are linked systems, that are subject to change by growth and development. The land use plan, which includes projections of future development, determines the character of the transportation plan. On the other hand, transportation has a major impact on the form of the City. Lincoln and Lancaster County will use major road projects to reinforce desirable land use development patterns.
- Planning as a Process. Transportation planning is a dynamic process, responding to such factors as community growth, development directions, and social and lifestyle changes. Therefore, the Comprehensive Plan should also establish an ongoing process that responds to these changes.

The overall objectives of the transportation plan include:

- Developing a balanced transportation system that meets the mobility needs of the community and supports Lincoln and Lancaster County's land use projections and plan.
- Using the existing transportation system to its best advantage.

- Develop ~~Creating~~and maintain a sustainable transportation network that minimizes energy consumption and environmental pollution.

- Increasing the use of ~~alternate~~under-utilized means of transportation, including public transportation, ~~bicycle~~bicycling transit, and ~~pedestrian movement~~walking, by improving and expanding facilities ~~and~~, services and by encouraging compact, walkable land use patterns and project designs.

- Continuing Lincoln's street and trails network into newly developing areas.

- Designing a street and road improvement program that is both physically attractive and sensitive to the environments of urban neighborhoods.

- Maximizing the safe and efficient movement of railroad traffic, while minimizing at grade street conflicts and

reducing the creation of barriers ~~created~~ by rail corridors.

- Enhancing aviation facilities, while minimizing their ~~effect~~impact on surrounding land uses.

- Investigate and secure additional resources to implement the proposed transportation system.

The maintenance, improvement and expansion of the ~~t~~Long Range Transportation ~~system~~Plan is fiscally constrained. The benefits and costs of alternative transportation improvements must be evaluated on an ongoing basis to assure that the public interest is best served.

~~This Plan acknowledges that the~~The transportation ~~planning process is both dynamic and ongoing. The~~ planning process establishes a framework within which all possible transportation improvements are evaluated and prioritized for implementation. This process establishes a series of refinements that move projects from the general to the specific and from concept to construction.

TRANSPORTATION PLANNING REQUIREMENTS

~~THREE PIECES OF~~ Federal legislation dramatically affects the way transportation planning is conducted in the United States:

Clean Air Act Amendment (CAAA) of 1990: This legislation asks communities to explore modes of travel other than ~~private~~single occupant vehicles to improve air quality while meeting the population's mobility needs.

~~Inter-Model~~

The Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) became law on August 10, 2005 and is the most recent authorization for surface transportation investment in the United States. This builds upon the two previous national transportation bills, the Inter-modal Surface Transportation Efficiency Act ~~(ISTEA) of 1991: This legislation emphasizes inter-modal and multi-modal transportation planning. Plans must conform to air quality and fiscal requirements. It also calls for transportation planning to include the movement of people and goods.~~ of 1991 (ISTEA) and the Transportation Equity Act for the 21st ~~Century (TEA-21) of 1998: This latest legislation extends and molds many of the ideas embodied in the ISTEA measure. Meeting the challenges of continued increases in traffic~~ Century (TEA-21) which established a new agenda for maintaining and investing in the nation's transportation infrastructure. SAFETEA-LU carries forward many of the principles and accomplishments of previous legislation and builds on and refines many existing efforts. This legislation also introduces new measures to meet the many challenges facing our transportation system which include improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing Inter-modal

The Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) lists eight factors to be considered in the Long Range Transportation Plan:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase the accessibility options available to people and freight;
- Protect and enhance the environment, promote energy conservation, and improve quality of life;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation; and

connectivity, and protecting the ~~natural environment, and advancing economic growth are but some of the legislation's objectives.~~

~~**PEDESTRIANS**~~

environment.

SAFETEA-LU promotes more efficient and effective Federal surface transportation programs by focusing on transportation issues of national significance, while giving State and local transportation decision makers more flexibility for solving transportation problems in their communities. It is the intent of this transportation plan to meet or exceed the principles of SAFETEA-LU planning provisions in addressing the changing transportation needs and many challenges facing the Lincoln Metropolitan Planning Area.

The key elements and directives of SAFETEA-LU, as they pertain to the long range transportation plan, are:

1. Planning Cycle for Metropolitan Transportation Plans. Metropolitan Transportation Plans in air quality non-attainment or maintenance areas are now required to be updated every four years. Plans in areas that are in attainment (ie; Lincoln) must be updated at least every five years.

2. Annual List of Projects. Two new project types must be included: pedestrian walkways and bicycle transportation facilities. The MPO's intention to build such facilities must be written into the Metropolitan Transportation Plan and Transportation Improvement Program (TIP).

3. Planning Factors. SAFETEA-LU requires the metropolitan transportation planning process to provide for consideration of projects and strategies that will address eight key planning elements.

4. Creation of Strategic Highway Safety Plans (SHSP). Metropolitan Transportation Plans must reflect the goals and objectives of the adopted SHSP. States are responsible for drafting the SHSP, but MPOs must refer to and have consistent objectives with the SHSP.

5. Environmental Mitigation. The Metropolitan Transportation Plan must include a discussion of the types of potential environmental mitigation activities, and potential locations for these activities, to restore and maintain environmental functions that could be affected by the Metropolitan Transportation Plan.

6. MPO Consultation with Environmental Agencies. Metropolitan Transportation Plans should include a textual provision for consulting with state and Federal environmental protection, tribal government, wildlife management, land management, and historic preservation agencies. This should include a comparison of maps and inventory lists.

7. Existing Transportation Facilities. Metropolitan Transportation Plans should include operational and management strategies that improve the performance of existing facilities. These strategies should reduce overall congestion and facilitate the flow of people and goods.

8. Congestion Management Process. Traffic Management Areas (TMAs) should rename their Congestion Management System to Congestion Management Process. SAFETEA-LU requires that the Congestion Management Process be a key element of the Metropolitan Transportation Plan. This indicates the intent of Congress is for Congestion Management Processes to be of greater emphasis to MPOs.

9. Public Participation Plan. MPOs must develop a written public participation plan. This is a plan that lays out the process for ensuring public review and input on MPO documents.

10. Coordinated Public Transit Human Services Transportation Plans. These plans must be developed to

receive certain types of Federal Transit funding. These plans must be developed through a process that includes representatives from public, private, and non-profit transportation providers.

SAFETY AND SECURITY

A significant portion of the City's urban transportation planning process involves the collection of transportation related crash data. Crash data and analysis is an important transportation engineering tool, that provides a foundation for improving the safety and security of the transportation system. The City's annual crash report provides a source of information through which local and state officials examine and respond to changing transportation conditions. During the year 2004 approximately 9000 crashes were reported, involving pedestrians, bicyclists, buses, trucks, trains, motorcycles and automobiles, within the City limits. Theses total crashes resulted in an estimated monetary loss of $184 million.

The State of Nebraska's highway traffic fatality rate of 1.4 fatalities per 100 million vehicle miles of travel (MVMT) generally parallels the National average of 1.5 fatalities per 100MVMT. The State's goal is to achieve a rate of 1.0 fatalities per MVMT by the year 2008. Accordingly, the City's goal should mirror that of the state to reduce overall fatalities and injury crashes during and beyond the planning period. To achieve these fundamental goals, it is important that national, state and local standards along with education, enforcement, engineering and evaluations be pursued.

Nationally the Federal Highway Administration (FHWA) continues to emphasize transportation safety. As a result the primary focus of highway planning and investment is on improving the safety of the transportation system. In accordance with the new provisions in SAFETEA-LU each state is required to develop, prepare, submit and implement a comprehensive safety plan. The Nebraska Safety Plan developed in collaboration with public and private agencies has identified the following Critical Emphasis Areas that will require the continuation of existing or implementation of new programs:

- To reduce the number of alcohol-related crashes.
- To reduce young drivers' involvement in fatal and injury crashes.
- To increase occupant restraint use.
- To reduce the number of speed-related crashes.
- To improve the accuracy, timeliness and completeness of traffic records data.
- To reduce the number of run-off-the-road crashes.
- To improve roadway intersection safety.
- To increase roadway work zone safety.
- To increase commercial vehicle safety.

The City's Annual Crash report and Transportation Crash records system is intended to address the requirements of SAFETEA-LU and the state-wide Critical Emphasis areas. It is anticipated that the City's transportation safety program will continue to emphasize education, enforcement, engineering and evaluation to help mitigate crashes. It is imperative that all funding opportunities be pursued to help mitigate and improve Lincoln's transportation safety program.

The safe, secure and continuous movement of people and goods during emergencies depends upon well coordinated operations plans and policies. The full capability of the transportation system must be harnessed and optimized. To address the security needs of our community and the transportation system infrastructure, it is anticipated that a greater emphasis would be placed on the funding and implementation of Intelligent Transportation System(ITS) technologies. Applicable ITS technologies will be of enormous benefit, particularly when they are integrated with information and communication systems of our public safety agencies. These ITS technologies would be supplemented by enforcement strategies, dissemination of real-time information and education.

It is envisioned that all activities pertaining to the Safety and Security of the transportation infrastructure and the community will remain a high priority through out the 2030 planning period.

PEDESTRIANS

Walking is an essential part of our daily activities, whether it be trips to work, shop, or play. Often pedestrian facilities are overlooked or merely added onto street improvement projects. However, to preserve and enhance the quality of life for Lincoln, consistent maintenance and rehabilitation of the existing pedestrian system and additional facilities are needed. Planning and developing pedestrian facilities should consider many factors:

- Location of existing and planned activity centers and districts, such as shopping malls, older neighborhood centers, libraries, community centers and schools.
- Programs to retrofit established sections of town with pedestrian amenities.
- Design standards for pedestrian facilities in new residential and mixed-use developments.
- Location of existing and planned multi-use trails.
- Requirements from the Americans With Disabilities Act (ADA).
- Needs of a growing senior population.

Pedestrian and Bicycle Workshop Vision Statement

"Elevate status of pedestrians and bicyclists in the community to be an integral part of the Transportation

The Comprehensive Plan's Pedestrian Plan serves to make pedestrian facilities an integral part of the planning and development from the earliest stages of the planning process.

PEDESTRIAN FACILITIES PLAN FOR ADA COMPLIANCE

The City of Lincoln Public Works & Utilities Department will update the current Pedestrian Facilities ADA Transition Plan (1992) with the development of a supplemental planning document, (Pedestrian Master Plan.) This plan will address the requirement to install curb ramps at existing pedestrian walkways, to repair sidewalks and to meet the expectations of pedestrians. The objective is to comply with ADA regulatory requirements and standards for pedestrians and follow guidance given in the U.S. Department of Justice Investigation Report (DOT # 2006-0094), May, 2006. The Pedestrian Master Plan is to include a schedule of pedestrian facility improvements for the continued implementation of ADA requirements that will be updated and kept current with available budget and public input.

The intent of the American with Disabilities Act of 1990 (ADA) [42 U.S.C. 12181] is to provide persons with disabilities with accommodations and access equal to, or similar to that available to any other persons. The ADA gives civil rights protections to individuals with disabilities, guarantees equal opportunity for individuals with disabilities in public accommodations and is enforced as other civil rights laws

The draft Pedestrian Master Planning document is to be completed by May 1, 2007. An advisory committee or task force may be created, as deemed appropriate, to assure public involvement by special interest groups. The City of Lincoln will be hosting Civil Rights Training for staff to assure sensitivity and knowledge of laws governing the stewardship of the American with Disabilities Act as it relates to pedestrian transportation issues.

PEDESTRIAN LEVEL OF SERVICE FACTORS

Five factors make up the quality of the pedestrian environment and define pedestrian level of service:

- Continuity -- The sidewalk system should be complete ~~and~~, without gaps, and maintained in good repair. The pedestrian network in shopping centers should be integrated with adjacent activities.
- Security - Pedestrians should be visible to motorists and other pedestrians. Pedestrians should be separated from motorists and bicyclists. Adequate lighting should be provided.
- Visual Interest - Pedestrians enjoy a visually appealing environment.- Street lighting, fountains, and benches should match the local architecture. Pedestrian amenities should include landscaped parkways with street trees between the street and sidewalk while being sensitive to existing areas and uses.
- Directness -- Pedestrians should be able to walk in a reasonably direct path to destinations like transit stops, schools, parks, and commercial and mixed-use activity centers. Directness is the ratio of actual distance along a sidewalk or pathway divided by the minimum distance the trip would take on a grid system.
- Street Crossing -- Street crossings should feel be safe and feel comfortable. Factors to consider are number of lanes to cross, traffic volumes, turning movements, speed of traffic, signal indication, curb radius, crosswalks, lighting, raised medians, visibility, curb ramps, pedestrian buttons and convenience.

PEDESTRIAN ACTIVITY CENTERS PLAN

Pedestrians are found throughout the community. Their needs can vary by where they are located:

- Pedestrian Districts - These areas are typically located in settings where people go to walk around, shop, eat, or conduct business.

- These districts attract large numbers of pedestrians on a regular basis. They include the Downtown (along with the main campus of the University of Nebraska-Lincoln), University Place, College View, and Havelock. Pedestrian level of service standards in these areas should be high. These areas should have direct, continuous sidewalks with safe street crossings. Visual interest and amenities should serve to attract people to these districts. Future large scale, mixed- use activity districts should be considered members of this category of pedestrian activity centers.
- Activity Corridors and Centers - These areas tend to be located along arterials, particularly where two major arterials might intersect. These locations often have strip commercial or "L" shaped neighborhood shopping centers. Directness and safety for pedestrians going to, from, and within these corridors and centers should be stressed.
- Schools - While it might not be critical for the route to school to be picturesque and visually captivating, a safe and secure environment must be provided for students going to and coming from schools. Sidewalks should be direct and continuous with safe street crossings.
- Transit Corridors - Transit trips begin and end as pedestrian trips. Directness and safety are critical elements.
- Other Areas - All areas of the community should have safe, secure, and reasonably direct pedestrian connections. Activities of daily living should be available within walking distance. Neighborhoods should include homes, stores, workplaces, schools, and places to recreate. Interconnecting streets, trails, and sidewalks should be designed to encourage walking and bicycling, reduce the number and length of automobile trips, and conserve energy.

STRATEGIES: PEDESTRIAN ACTIVITY CENTERS PLAN

- Encourage, promote, and coordinate land use that supports pedestrian activity.
- Target pedestrian improvements in areas shown on the Pedestrian Activity Centers Plan. Refine map as necessary. Use pedestrian standards.
- Establish dedicated funding ~~discussed later in this section~~.
- Give priority consideration to funding pedestrian facilities within the capital improvements programming process.
- Maintain and improve the existing school crossing protection program~~.~~ and develop and implement the Safe Routes to School projects.

In order to create greater pedestrian opportunities, particularly in the construction of new "multi-modal" roads and the reconstruction of existing roads, sidewalks and safe street crossings should give consideration to pedestrian push buttons, crosswalk enhancements, median refuge islands, bulb-outs, and other design features. In the older built environment, design considerations should be given to similar options with special flexibility sought to minimize impacts to adjacent uses.

MULTI-USE TRAIL SYSTEM

The existing and planned multi-use trail system that serves the community is a critical resource for pedestrian users as well as other users such as bicyclists. As a strength of the community and a foundation to further meet the needs of pedestrians and other users, the maintenance, rehabilitation, and expansion of the multi-use trail system should be a priority.

STRATEGIES: MULTI-USE TRAIL SYSTEM

- Extend the multi-use trail system into new neighborhoods as the city grows. Connections should be made to schools, parks, and other activity areas.

- Explore options to establish a dedicated funding plan to complete the multi-use trail facilities plan, and for the continued maintenance and rehabilitation of these facilities.
- Identify critical segments offering greater system continuity and connections for major activity centers and schools. Undertake projects to complete identified gaps in the system.
- Promote the usefulness of multi-use trails for various users including pedestrians.

PEDESTRIAN STANDARDS

Pedestrian standards should be prepared for public and private developments. These standards should consider existing and future pedestrian activity centers. The standards should be realistic and easy to understand. Checklists may be used to implement the standards.

Pedestrian standards should identify key destinations, and plan for pedestrian facilities to and from these locations. Key destinations include schools, parks, trails, and activity centers.

STRATEGIES: PEDESTRIAN STANDARDS

- Develop minimum pedestrian standards for all new public works projects, including new roadways and reconstruction of existing roadways. These standards should include street crossing treatment, sidewalk design, and landscaping.
- Continue ~~D~~to develop ~~minimum~~and implement pedestrian standards for private developments to provide pedestrian facilities connecting key destinations such as schools, parks, trails, and activity centers.
- Select a short-term public works demonstration project embracing best practices pedestrian design standards.
- Develop a city-wide database of pedestrian facilities and crosswalks. Develop a dedicated funding mechanism and prioritization process for implementing repairs and improvements.
- The planning process is to develop standards that define pedestrian level of service concepts.

- Include pedestrian/bicycle access in the design and construction of bridge and roadway projects.

PEDESTRIAN FACILITIES COORDINATION

There is currently not a single clearing house for pedestrian planning, design, and engineering in the City of Lincoln. Instead, a number of departments address pedestrian mobility and sidewalks with varying perspectives as part of other job assignments. Often either these conflict with the objectives for pedestrian design, or the specific job descriptions put pedestrian planning, design, and engineering at a lower priority than other tasks.

The City should clearly identify the organizational responsibility for pedestrian facility planning, design, engineering, and implementation. This should include responsibility for reviewing and developing pedestrian policies and standards for public and private developments, addressing pedestrian improvements needs, developing and updating the Pedestrian Activities Center Plan map, applying for state and federal grants, and prioritizing pedestrian improvements.

STRATEGIES: PEDESTRIAN FACILITIES COORDINATION

- Identify the City agency (or agencies) responsible for coordinating pedestrian and bicycle planning activities and for overseeing all pedestrian and bicycle activities within the City.

PEDESTRIAN EDUCATION AND ENFORCEMENT

The Pedestrian Plan should also contain an ongoing educational element regarding air quality, vehicular laws, the health benefits of pedestrian activities, and the potential contribution of pedestrian activities to the reduction of congestion. This should be part of an overall city communication and education program. In addition, enforcement of the vehicle code for both the pedestrian and automobile driver is necessary to promote a safe environment.

STRATEGIES: DEVELOP A PEDESTRIAN EDUCATION PROGRAM AND ENFORCE TRAFFIC LAWS

- Develop a pedestrian education program as part of the City's overall communication and education program.
- Provide police resources and manpower to enforce pedestrian and vehicular traffic laws.

BICYCLES ~~AND TRAILS~~

Bicycles can play an important role in the community by providing a healthy alternative to the automobile, reducing traffic congestion, improving air quality, and creating a more balanced transportation system.

In the planning, engineering, maintenance, and rehabilitation of all streets and roads, cyclists should be considered "design users," with each street being considered a "bicycle facility." Education and enforcement are also key to encourage cycling as viable transportation and creating an environment which is safe and convenient for cyclists and motorists.

Improvement to existing street and trail facilities that are presently suitable for bicycles and other users, and the development of an expanded system of bicycle-friendly roads and trails for the City of Lincoln and Lancaster County's future have been expressed as strong community goals. This is emphasized by the Pedestrian and Bicycle Workshop Vision Statement: "Elevate status of pedestrians and bicyclists in the community to be an integral part of the Transportation Plan."

Bicycle Facilities Planning Lingo

Bikeway – Any street or trail specifically designated for bicycle travel. May be designated exclusively for use by bicycles or may **be** shared with other transportation modes.

Multi-Use Path and Trail – Bikeway or trail that is physically separated from motor vehicle traffic by open space or a barrier. May be within the road right-of-way or have its own right-of-way. Also referred to as a "shared use" or "multi-use path," "recreational trail," or Class I bikeway.

Bicycle Lane – Bikeway on a street designated for preferential or exclusive use of bicycles by striping, signage, and pavement markings. Also referred to as a Class II bikeway.

Bicycle Route – Streets with "Bike Route" signs installed along them. Intended for the shared use of automobiles and bicyclists without striping or pavement markings. Sometimes referred to as a Class III bikeway.

Trail Head – Major entry point onto a trail system often providing public facilities, such as parking, water fountains, bicycle racks, picnic facilities, and

MULTI-USE - TRAILS AND BICYCLE ~~AND TRAILS~~FACILITIES STANDARDS

The community has an existing system of ~~bicycle~~multi-use trails and on-street bike routes. The present system serves both commuter bicyclists who use their bicycles daily for work and shopping trips,

and tend to travel from point to point, and recreational bicyclists who tend to ride their bicycles

on a more occasional basis, seeking attractive and safe routes. The system also serves other users such as pedestrians. Planning for future ~~bike~~multi-use trails should be guided by the goal of having a ~~bike~~multi-use trail within one mile of all residences in the city.

The future system should include a combination of ~~bicycle~~multi-use trails, bike routes, and bicycle lanes. ~~*Strategies: Bicycle and Trails*~~ that serve the entire community. As a strength of the community and a foundation to further meet the needs of bicyclists, pedestrians, and other users, the maintenance, rehabilitation, and expansion of the multi-use trail system should be a priority.

STRATEGIES: MULTI-USE TRAILS AND BICYCLE FACILITIES STANDARDS FOR EXISTING AREAS

- Extend the ~~bicycle and~~multi-use trails system into the new and redeveloping neighborhoods as the city grows. Connections should be made to schools, parks, and other activity areas.
- Explore options to establish a dedicated funding plan to complete the multi-use trails and bicycle ~~and trails~~ facilities plan, and for the continued maintenance and rehabilitation of these facilities.
- Identify critical segments offering greater system continuity and connections for major activity centers, schools and the University of Nebraska. Undertake projects to complete identified gaps in the system.
- Evaluate existing bicycle routes and other travel corridors for opportunities to provide bicycle lanes throughout the entire community.
- Promote the usefulness of trails for various users including pedestrians.
- Provide cyclists safe, direct, and convenient access to all destinations served by the Lincoln area streets and roads network, and provide bike racks for commuters and shoppers.
- Maintain existing route maps for all trails, lanes, and routes and provide appropriate signage.
- Implement a public information and education program encouraging bicycles as an alternative mode of transportation.

BICYCLES IN THE DOWNTOWN

Providing for the mobility needs of motorists and bicyclists in the Downtown will require careful planning and engineering.

STRATEGIES: BICYCLES IN THE DOWNTOWN

~~**• DEVELOP AND IMPLEMENT A DOWNTOWN BICYCLE FACILITIES PLAN. THIS PLAN SHALL INCLUDE NORTH-SOUTH AND EAST-WEST BICYCLE LANES. IDENTIFY AND DEVELOP AT LEAST ONE NORTH-SOUTH AND ONE EAST-WEST CORRIDOR TO PILOT DEDICATED BIKE LANES WITHIN ONE YEAR OF THE DOWNTOWN BICYCLE FACILITIES PLAN APPROVAL.**~~

- Continue to implement the Bicycle Framework plan as adopted in the Downtown Master Plan.
- Work with the Downtown Lincoln Association, the Lincoln Public Works and Utilities Department, the Lincoln Parks and Recreation Department, the City/County Planning Department, and other agencies interested in the ~~creation of a Downtown~~ implementation of the Bicycle Framework plan as adopted in the Downtown Master Plan.

MULTI-USE TRAILS AND BICYCLE FACILITIES ~~PLAN.~~

~~BICYCLE AND TRAILS~~ STANDARDS FOR DEVELOPING AREAS

~~B~~Multi-use trails and bicycle ~~and trails~~facilities standards should be prepared for public and private developments.

These standards should consider existing and future activity centers. The standards should be realistic and easy to understand. Checklists may be used to implement the standards.

BMulti-use trails and bicycle and trailsfacilities standards should identify key destinations, and plan for bicycle and trails facilities to and from these locations. Key destinations include schools, parks, trails, and activity centers.

STRATEGIES: MULTI-USE TRAILS AND BICYCLE AND TRAILSFACILITIES STANDARDS FOR DEVELOPING AREAS

- Develop minimum multi-use trails and bicycle and trailfacilities standards for, including bike lanes, all new roadways and reconstruction of existing roadways.
- Encourage minimum multi-use trails and bicycle and trailfacilities standards for private developments to provide bicycle and trails facilities and amenities connecting and serving key destinations such as schools, parks, and activity centers.
- Select and implement a near term bicycle facilities demonstration project embracing best engineering practices, bicycle design standards, and minimum Federal guidelines.
- Explore opportunities to develop multi-use trails within rail corridors proposed to be abandoned as an interim transportation use.
- Explore opportunities to combine multi-use trails within active rail corridors where linkages are needed, and rail traffic volume is low.
- Develop an interconnected system of multi-use trails that utilizes drainage channels and greenway corridors when feasible. Trail routes adjoining major streets should only be considered in establishing trail connections over ridgelines between drainage basins.
- Consider the location and alignment of multi-use trails and bike lanes in reviewing development applications. Request that the platform for trails be graded in conjunction with the associated development.
-

- Provide cyclists safe, direct, and convenient access to all destinations served by the Lincoln area streets and roads network, and provide bike racks for commuters and shoppers.
- Grade separated crossings are to be considered in conjunction with all new construction and reconstruction of transportation projects at all trail/arterial street intersections that do not coincide with arterial/arterial street crossings.

MULTI-USE TRAILS AND BICYCLE AND TRAILS FACILITIES COORDINATION

The City should clearly identify the organizational responsibility for multi-use trails and bicycle and trails facility planning, design, engineering, and implementation. This should include responsibility for reviewing and developing multi-use trails and bicycle and trails facilities policies and standards for public and private developments, addressing bicycle and trail improvements needs, developing and updating the Multi-Use Trails and Bicycle and Trails Facilities Plan Map, applying for state and federal grants, and prioritizing improvements.

STRATEGIES: MULTI-USE TRAILS AND BICYCLE AND TRAILS FACILITIES COORDINATION

- Identify the City agency (or agencies) responsible for coordinating each aspect of the Multi-Use Trails and Bicycle and Trails Facilities Plan.

LANCASTER COUNTY BIKEWAYS

The community should seek to expand bicycling opportunities throughout all of Lancaster County.

STRATEGIES: LANCASTER COUNTY BIKEWAYS

- Identify potential bicycle corridors in rural areas of the County based upon existing and planned activity centers and land uses.
- Identify corridors linking County bikeways to existing and planned City bicycle facilities.
- Explore opportunities for widening the shoulders of County roads adjacent to the City of Lincoln. This should occur when reconstruction or resurfacing of the road is planned. Safety should be a primary consideration.

BICYCLE AMENITIES

A major element of the overall bicycle plan is the provision for adequate bicycle facilities as part of the built environment. For example, while parking for cars is routinely planned for, rarely is there a place where the bicyclists can lock or store their bicycle. These facilities can be public facilities or part of private development. In addition to basic bicycle locking and storage facilities, many communities and larger mixed-use centers provide basic shower facilities for commuter bicyclists.

Bicycle amenities should be considered during the planning of public and private developments.

STRATEGIES: BICYCLE AMENITIES

- Develop bicycle rack and storage requirements for new developments. Requirements should address design, location, and number. Requiring locker facilities in major developments should be considered.
- Provide functional bicycle racks and storage facilities in all major destination areas.
- Explore opportunities for trail head facilities for heavily used trails.

BICYCLE EDUCATION AND ENFORCEMENT

The potential environmental, health, and traffic reduction benefits of bicycles should be promoted. Enforcing the vehicular code for both bicycles and motorists should also be pursued.

STRATEGIES: BICYCLE EDUCATION AND ENFORCEMENT

- Develop a bicycle education program to promote bicycle awareness and safety.
- Provide police resources to enforce bicycle and vehicular traffic laws.
- Use the City and County's Internet sites and Cable Access Channel 5 to inform and educate the community about bicycles.

PUBLIC TRANSPORTATION

Public transportation is an essential component of the transportation system and should be integrated with all other transportation modes. StarTran - the City operated transit system - provides fixed-route service, para-transit (~~Handi-Van), and taxi door-to-door~~Handi-Van), and brokerage **or contracted transportation** service that is door-to-door demand responsive disability service. These public services are critical to those persons that are dependent on public transit services. These services are necessary for compliance with the Federal Americans with Disabilities Act. In addition to providing services for the transit dependent, StarTran also offers services as an alternative to the automobile for the non-transit dependent.

As a public service, StarTran transit service should be funded and supported similar to any other public service. A public transit system of a size and quality commensurate with the needs of future City of Lincoln and Lancaster County residents and businesses is an important element of the Transportation Plan.

Transit service, whether fixed-route or demand-responsive service, is intricately linked to many other governmental and planning actions. Providing transit fixed-route service relies upon direct pedestrian connections from the place where the trip begins to where the trip ends. Transit service reacts to the density of the City, transportation corridors and activity centers, as well as to the design of activities along those corridors and centers it serves. High travel corridors and activity centers with a mix of uses provide the demand that can effectively support higher levels of transit service.

Public investment and future development must balance all transportation modes. This balance includes accommodating the pedestrian and the private automobile - through construction of arterial roadways and construction and subsidies for high cost multi-level parking structures - while also investing in fixed-transit and demand-responsive services. The design of the City's infrastructure and roadway system must consider all transportation modes, including transit. An example of public investment that will be implemented during the first half of the planning period is an "Automatic Vehicle Location System" and "Smart Card" Fare-box technology. This Intelligent Transportation Systems technology should help increase overall efficiency, security and operation of the transit system.

The evolution of an auto-oriented Lincoln has occurred over decades. It will similarly take time to restructure development patterns ~~and~~and land uses to achieve an environment which can promote productive transit service. ~~One idea that should be further explored is Personal Rapid Transit (PRT), which is an individual demand responsive transportation service. The PRT term is most commonly used for a range of concept technologies that are a system of typically elevated one-way guideways connecting small stations spaced relatively close together. With the stations placed off of the main guideway, this will allow vehicles to by-pass the stations thus providing a non-stop trip. Current PRT designs envision small vehicles, or "pods", seating 3-6 passengers each, traveling at 25 to 50 mph from any origin station on the system to any other station in the system. This concept should be reviewed in the multi-modal study. (PRT amendment adopted by City Council; amendment denied by County Board.)~~

To achieve viable long range transit service for the City of Lincoln and Lancaster County in the year 20~~25~~30, a number of broad policies and actions are needed to guide successful implementation and expansion of public transit. These policies and action items are ~~described below.~~
anticipated from the results of the recently initiated 2006 Transit Development Study. Upon completion, the study will be included by reference as a part of the 2030 Long Range Transportation Plan. Included in the formulation of the Transportation Development Plan (TDP) will be a comprehensive operations analysis, near and long term transit service alternatives, updated service standards and policies, management and funding options. The policy and action items anticipated from the TDP are:

BALANCED TRANSIT SYSTEM

Providing transit services throughout the city requires balancing the number of routes, the frequency of service, and the hours of service.

~~*Strategies: Balanced Transit System*~~

~~• Monitor and modify~~It is expected that the TDP should provide a framework for monitoring and modifying transit services in response to changes in development patterns and user~~s' needs.~~

~~• Consider transit service changes supporting the Comprehensive Plan's Vision of Downtown as a diverse center of activity. Such transit services should aid mobility within the Downtown and further the Downtown's role as an entertainment center.~~

~~TRANSIT-FRIENDLY~~ needs.

TRANSIT-FRIENDLY DEVELOPMENT

Effective public transportation service requires good pedestrian connections to and from transit stops, density of activities, and development designs supportive of transit riders. Pedestrian connections to transit must be direct and the sidewalk system must have continuity. Street crossings to transit stops must be safe. Productive transit service requires high-density land development patterns which link residential areas and employment, retail, and service centers. Development design needs to be transit friendly providing convenient access to transit services.

~~*Strategies: Transit-Friendly Development*~~

~~• Develop direct and continuous pedestrian access standards for~~ The TDP should help recommend a system for transit review of new development ~~and redevelopment projects.~~

~~• Promote mixed-use, high-density activity centers and corridors integrating transit-oriented~~designs. This would be important in ensuring that new development contain transit-oriented standards ~~as the project's design.~~

~~• Develop and implement transit-oriented design standards for new development.~~

MAXIMIZE TRANSIT PRODUCTIVITY

The 20~~25~~30 Plan needs to address both the coverage requirements for serving the transit dependent population as well as productive routes for capturing new riders and reducing congestion. Achieving higher productive routes requires strategic planning effort to direct growth patterns along transit corridors and concentrate activity into mixed-use activity centers.

Maximum transit coverage and maximum transit productivity forms the continuum of options for the transit provider. At one end of the continuum is the provision of fixed route transit services which should strive to balance geographic coverage with ridership productivity.

~~*Strategies: Maximize Transit Productivity*~~

~~• Develop incentives and land development policies promoting mixed-use, high-density development along transit corridors or areas with proximity to existing or future transit service.~~

~~• Monitor~~Monitoring and ~~modify~~modifying transit services to maximize transit ridership is a

key element of the TDP.

MAXIMIZE TRANSIT CONNECTIONS WHEN STRUCTURING ROUTES

As the city develops the need to serve additional populations and destinations will change and grow. StarTran routes should be modified to recognize this change in ridership and transit user needs.

~~*Strategies: Maximize Transit Connections When Structuring Routes*~~

~~• Near-Term: Maintain the current radial network to the Downtown and provide supplemental service to other portions of the urban area with convenient transfer options.~~

~~• Long-Term: Expand the modified grid system while maintaining the productive elements of the radial system serving Downtown. Reallocate~~The TDP should help explore reallocating less productive ~~radial service into grid~~ services ~~by targeting~~to emerging ~~mixed-use~~ activity centers and corridors.

ACCOMMODATE TRANSIT WHEN DESIGNING ROADWAY IMPROVEMENTS

Roadway design should consider the needs of public transit, including bus turnouts, sidewalk connections to transit stops, safe street crossings, street lighting for security, and bus stops and benches.

~~*Strategies: Accommodate Transit When Designing Roadway Improvements*~~

~~• Develop and apply roadway design standards that support and promote public transit use. These standards should accommodate transit operations and rider safety and comfort.~~

The TDP should address such transit related amenities for both roadways and land use development.

EXPLORE REGIONAL AND COMMUTER TRANSIT SERVICE OPTIONS

Travel between Lincoln and regional destinations ~~(~~such as the Omaha metropolitan area~~)~~. will increase during the planning period. The travel will include routine commuter trips as well as other discretionary travel. Public transportation may support this travel using a variety of transit delivery options including various vehicle types and service configurations. Planning and improvements might be considered to help promote and support the possibility of commuter rail for Lincoln beyond 20~~25~~30. These strategies might include developing a multi-modal center in the Downtown area with immediate access to the existing rail service.

~~*Strategies: Explore Regional and Commuter Transit Service Options*~~

~~• Consider~~The TDP should consider rail service and other transit modes to provide regional public transportation services

—(particularly between Lincoln and Omaha) during the interim and long term.

STAR~~T~~TRAN TRANSIT CONTRACT SERVICE

Contract transit services typically operate with a higher level of ridership productivity and generate greater revenues than do traditional fixed route services.

~~*Strategy: StarTran Transit Contract Service*~~

~~• Pursue~~The TDP will explore contract transit services funded by various local and federal government funds and rider fares. ~~Other local options for collecting rider fares are through~~

~~contracted services. One example is the University of Nebraska, which contracts for an inter-campus shuttle and city wide transit service. Through direct contract funding, all University faculty and staff pay no fares when using the service.~~

Contract service is common in university cities as it (1) provides the transit operator a large and compact ridership base to service, and (2) provides university students and faculty with convenient transit access. This type of contract also benefits a city in which the university is located by reducing congestion.

~~*Strategies: Pursue Expanded Contract Transit Service Contracts*~~

~~• Pursue contracted transit service opportunities with employment, entertainment, and commercial uses.~~

~~• Develop a policy for encouraging major employment, entertainment, and mixed-use centers to utilize contract transit services.~~

SPECIAL NEEDS DEMAND RESPONSIVE TRANSIT

StarTran provides special transportation services for persons with disabilities in compliance with the Americans with Disabilities Act. Services include accessible fixed route buses, the Handi-Van service, and brokerage~~, and taxi programs~~.

Special needs transit services are also offered to their clients by various local private organizations. Area-wide coordination efforts of all special transportation services are currently underway that would make better use of available equipment and better meet the needs of persons with disabilities.

~~*Strategies: Special Needs Demand Responsive Transit*~~

~~• Pursue coordination with special transit service providers to promote improved operational efficiency and cost effectiveness of special needs transportation services. This will include the coordination of such services to be determined through a planning process with stakeholders, including clients, agencies, and Startran.~~

~~**PARK-AND-RIDE.**~~

PARK-AND-RIDE OPPORTUNITIES

Establishing ~~park-and-ride~~park-and-ride locations along outlying areas of the community could support transit connections to the Downtown and other mixed use centers. As Lincoln grows and expands its urban boundary, trip numbers will increase. Shifting some automobile trips to transit can reduce traffic impacts within the existing community, reduce the cost of parking in the central core, and provide increased mobility options for both future and existing development.

~~*Strategies: Park-and-Ride Opportunities*~~

~~• StarTran and the City-County Planning Department should define strategic locations in the community for park-and-ride facilities.~~

~~• Encourage future developers to work with StarTran and the City to include park-and-ride opportunities in their developments.~~ The TDP should address park-and-ride and other transit related services and enhancements.

LONG TERM PUBLIC TRANSPORTATION FUNDING APPROACH

Enhancing transit usage should consider ways to ensure that public transportation service has committed, adequate financial support over the entire planning period.

StarTran fixed-route and demand-responsive transit services account for less than two percent of the current six-year City of Lincoln Transportation Improvement Program (TIP). While this level of funding might be adequate to provide for the basic transit services for the disabled and transit dependent, the funding level is not sufficient to provide the frequency, route coverage, and structure to compete with the level of service offered by the automobile.

Public funds and policies subsidize parking in the Downtown area against which transit then competes. Transit funding is not seriously considered as a way to provide mobility along congested travel corridors. There are significant fiscal, neighborhood, and environmental impacts when those corridors are widened. The long term strategy to enhance mobility though a wide range of alternative transportation modes requires long term funding commitments for StarTran.

~~*Strategies: Long Term Public Transportation Funding Approach*~~

~~• Conduct a funding and subsidy study to determine the trade-off costs and benefits of various transit funding levels.~~

~~• Establish a long term funding commitment to public transportation to provide for transit services for existing and future developments within the City.~~

It is expected that the TDP should address potential funding sources and alternatives that help support and increase StarTran's stability and viability during the planning period and beyond. The TDP should also help explore organizational options, state enabling legislation, and state funding policies.

PARKING IN THE DOWNTOWN AREA

Downtown Lincoln will continue as the largest commercial district within the city and county. As both new construction and reuse of existing structures occurs, the demand for parking services will remain strong. These parking services will be needed to support office workers, students, residents, and entertainment goers. Parking planning and management will include:

- New parking facilities are programmed in the near term for the ~~Haymarket area and the~~ eastern ~~edge~~vicinity of Downtown.
- The Antelope Valley Project will alter the long term land use and traffic patterns in the Downtown area. The provision of parking and other transportation services in and around Downtown will need to be considered as this redevelopment project moves forward.

~~• A new parking facility is being contemplated by the Public Building Commission to ease parking limitations near the County-City Building and Hall of Justice facilities.~~

- Pending further study on its future, the Pershing Auditorium complex could require the expansion of parking in ~~that area of Downtown.~~ its current location Downtown. If a new auditorium or arena is called for, further study would be needed to identify appropriate parking supplies.
- Comprehensive and subarea studies will need to be completed on a periodic basis to determine the need for additional parking or managing existing parking as new employment, residential, and entertainment centers arise.

STRATEGIES: PARKING IN THE DOWNTOWN AREA

- Employ management techniques to promote the efficient use of parking facilities in the Downtown, ~~including promotion of parking garages (especially for long term uses by offering discounts, time limits on meters, and contracts with commercial establishments) and reduced rates on fringe meters to attract parking away from core areas with high occupancy rates.~~
- ~~Continue and enhance~~ – by promoting parking facilities, monitoring occupancy levels and market-structured parking fees to offset high and low demand areas, evaluate and revise current validation and discount parking programs, and conduct periodic parking studies to evaluate parking conditions.
- Consider a comprehensive approach to managing and maintaining Downtown parking, by encompassing ~~public and private parking facilities, on-street parking, and fines.~~

management of off-street, on-street, enforcement, and collections of all parking activities.

FUTURE STREET AND ROAD NETWORK

Cars and trucks will continue to be the primary mode of travel for Lincoln and Lancaster County residents throughout and beyond the planning period of this Plan. These vehicles depend upon the expansion and continued maintenance of a street and road network allowing ease of mobility throughout the region.

In addition, much of the area's freight movement occurs on local streets and highways; StarTran buses use local streets to transport their patrons around the City; and bicyclists often utilize the street system for their travel.

Although investment in other modes of ~~travel~~transportation may decrease reliance on the automobile, ~~roads~~streets and highways will continue to form the backbone of the entire region's transportation system. However, evaluation, consideration and planning needs to be undertaken to promote and accommodate other alternative modes of transportation.

This subsection examines the future streets and highway system designed to serve the future community form of the City of Lincoln and Lancaster County as presented in this Comprehensive Plan. This subsection describes the future roadway projects, studies, and programs forming the Plan's transportation element in terms of:

- Functional Classification
- Urban Area Street System
- County Rural Road System

FUNCTIONAL CLASSIFICATION

Roadways are classified based on the function they serve. All roadways fall under one of four broad categories: principal arterial~~s~~, minor arterial~~s~~, collectors or local streets.

"Arterial~~s~~" are multiple use corridors that carry large volumes of through traffic. "Collectors" equally serve to carry traffic but also provide access to neighborhoods and abutting properties. "Local" streets primarily provide access to abutting properties. ~~These three primary functional classifications may be further classified for design purposes~~Each classification performs an important function in making the transportation system work effectively. The following describes the functions of the various street classifications used in the Lincoln-Lancaster County transportation planning area:

A. Principal Arterial~~s~~: This functional class of street serves the major portion of through-traffic entering and leaving the urban area and is designed to carry the highest traffic volumes. These serve intra-area traffic such as between the ~~CBD~~downtown and outlying residential areas ~~and~~or traffic between major inner-city communities or suburban centers. ~~Included in this class are fully controlled access facilities and partially controlled access facilities.~~ Managing and controlling access to these types of roadways is very important. This access must

respect and reflect the land uses and development context adjacent to each principal arterial. For example, managing and controlling access to and from a roadway in the "built environment" differs from that in developing locations, because of the varying character of these areas. The principal arterial system is stratified into the following two subsystems:

- Interstate Highway, Freeway and Expressway: These are divided, limited access facilities with no direct land access. The freeway does not have at-grade crossings or intersections. The expressway is similar to a freeway except it may have some cross streets that intersect at grade and access is either full or partially controlled. Both the freeway and expressway are intended to provide the highest degree of mobility serving potentially large traffic volumes and long trip lengths.
- Other Principal Arterials: This functional class of street serves the major portion of inter-community and intra-community traffic movement within the urban area and is designed to carry high traffic volumes. ~~For other principal arterials, the concept of service to abutting land is subordinate to serving major traffic movements.~~ Facilities within this classification are capable of providing direct access to adjacent land but such ~~service~~access is ~~to be~~ incidental to the primary functional responsibility of moving traffic within this system.

B.– Minor Arterials: This functional class serves trips of moderate length and offers a lower level of mobility than principal arterials. This class interconnects with, and augments principal arterials, distributes traffic to smaller areas, and contains streets that place some emphasis on land access. These are characterized by moderate to heavy traffic volumes.

C.– Collector Streets: These streets serve as a link between local streets and the arterial system. Collectors provide both access and traffic circulation within residential, commercial, and industrial areas. Collector streets also provide more direct routes through neighborhoods for use by transit, pedestrians and cyclists. Moderate to low traffic volumes are characteristic of these streets. There should be one north/south and one east/west continuous, but not straight, collector street within a developing square mile.

D.– Local Streets: These are composed of all lower order facilities that essentially serve as a conduit between abutting properties and higher order streets. Local streets provide the lowest level of mobility and generally exhibit the lowest traffic volumes.

URBAN AREA STREET SYSTEM

The long range program for improving the urban area street system is detailed below. This effort involves numerous projects and studies taking many years and costing millions of dollars to complete. Close planning and coordination among various Federal, State and local government agencies and departments will be needed. The planned future urban area street system is presented within the following elements:

- Federal and State Improvements
- South and East Beltway
- Antelope Valley Roadway Project
- "Two Plus Center Turn Lane" Program
- Additional Urban Area System Improvements
- Proposed Studies
- Highway 2 Corridor Preservation
- Right of Way Considerations

FEDERAL AND STATE IMPROVEMENTS

During the planning period, improvements are planned for Interstate 80 and many of the existing Nebraska State Highways in Lincoln and Lancaster County. These improvements can generally be categorized as the widening of

roadways or construction of interchanges. All of the projects listed below are considered to have funds committed ~~to their~~for design and construction during the 25 year planning period:

Interstate ~~Hwy~~Highway 80, between east and west county lines	6 lanes
US-34~~,~~ East, 84th Street to east county line	4 lanes + turn lanes
US-34~~,~~ West, west city limits to west ~~to~~ county line	4 lanes + turn lanes
US-6~~,~~ West, west city limits to west ~~to Emerald~~county line	**4 lanes + turn lanes**
US-6 (Sun Valley ~~Blvd.~~. Boulevard), "O" Street to Cornhusker ~~Hwy.~~Highway	4 lanes + turn lanes
~~West "O" St., N.W. 48th St. to N.W. 56th St.~~	~~4 lanes + turn lanes~~
~~US-77 and West Capital Parkway Interchange~~	~~Interchange~~
US-77 and Warlick ~~Blvd. Interchange~~	~~Interchange~~
Boulevard Intersection	Interchange
US-77 and West Pioneers Boulevard Intersection	Interchange
South Beltway, US-77 South to Nebraska Highway-2	4 lanes
US-79, US-34 to north county Line	Paving Improvement

The Interstate 80 project is part of the Nebraska Department of Roads' intent to ultimately widen this facility to six lanes from Omaha on the east to Grand Island on the west. This widening will include reconstructing several interchanges and overpasses as the Interstate passes through Lancaster County. This project could also involve the relocation of certain interchanges and the possible elimination of existing overpasses.

The Nebraska Department of Roads has completed study of portions of ~~US Highway 77~~US-77 as it passes through Lincoln. This study gave consideration to upgrading the facility to freeway status from its present classification as an expressway I-80 to the South Beltway. This upgrade will require eliminating existing at-grade intersections. These intersections could be replaced with interchanges, overpasses or the road connection could be eliminated all ~~together~~altogether with no crossing provided. As part of the US-77/West Beltway project, study for a potential overpasses at US-77 and Old Cheney Road and Rokeby Road will be conducted as a joint State/County/City feasibility study, including a traffic analysis, a citizen participation element, an appropriate environmental review~~,~~ ~~and~~. The study will be started no later than one year prior to the contract letting of the US-77 (West Bypass) freeway upgrade. The study will comply with FHWA procedures for Federal Aid projects and will attempt to maintain an Old Cheney connection to 1st Street.

As part of the implementation of this project to upgrade US-77 to freeway status the needs of pedestrians and bicyclists will be addressed. It was affirmed during the study process that the proposed pedestrian and bicycle crossing points at the planned Pioneers Boulevard interchange and at the abandoned railroad right-of-way south of the planned Warlick interchange would be provided. The existing US-77 bridge structures over the abandoned railroad right-of-way are intended to remain and be used to separate US-77 traffic from pedestrians and bicyclists, and the design of the new Pioneers interchange is to contain a multi-use trail facility. An extensive system of trail facilities is planned within this area extending along both the east and west side of the US-77 corridor. The US-77 trail connections will allow pedestrians and ~~bicyclists~~bicycle movement between the new growth area to the west and the existing urban area and the Wilderness Park Trails system to the east of US-77. Also, the City, County, and State will work together to resolve bicycle access issues that will result from the upgrading of this segment of US-77 to freeway status. The City, County, and State will collectively work together to provide a comparable alternative for cyclists.

Proposed Beltway Interchange Locations

South Beltway
- US-77
- 27th Street
- 70th Street
- 84th Street
- Nebraska Highway 2

East Beltway
- Interstate 80
- Fletcher Avenue
- Adams Street
- "O" Street
- Pioneers Boulevard

SOUTH AND EAST BELTWAY~~S~~

The South and East Beltway~~s~~ are essential components of a regional transportation

network. They will aid in moving car and truck traffic around and through congested urban areas, thus reducing travel delays and improving traffic flows across the entire street system. ~~The next step in their implementation involves p~~Protecting the beltway corridors, ~~acquisition~~acquiring the right-of-way, and obtaining funding has begun for these routes.

In addition to their four lanes of freeway, the beltway corridors are assumed to be multi-use areas incorporating the following features:

a. trails and pedestrian facilities
b. open spaces, including linear ~~greenways~~green ways, parks and natural areas
c. utility corridors
d. potential routes for alternative transportation modes

Their ultimate development as city-county multi-use corridors will require significant advance planning and coordination among many agencies. The planning and financing of the roadway and the other activities should be done concurrently. Maintaining open space along the corridors is in keeping with the Comprehensive Plan's Vision and serves as one way to address the impact the ~~b~~Beltway~~s~~ will have on the natural environment. The planning for these corridors should also consider their future role in bringing about the Salt Valley Heritage ~~Greenway~~Green way. A beltway corridor of approximately 1,320 feet in width is assumed in this Plan. While this area is more than is ultimately needed (or obtained) for the project, this planning assumption will allow greater flexibility in the facility's final design. This will also allow the multi-use corridors outside of the roadway to vary in width, with the final design of the roadway corridor being approximately 300 feet wide. During the design phase, every effort should be made to reduce the impact on adjacent residences and other sensitive uses where and whenever possible.

Of the two beltway alignments, the South Beltway must be built first, with construction coming within the first half of the planning period. The South Beltway is considered a committed City project. Planning and programming for the East Beltway should continue, with studies completed in the Stevens Creek Basin to address preservation of salient natural, cultural, and historic features, and the sensitive integration of these features into the basin. In the interim, corridor protection efforts for the South and East Beltway multi-use corridors should be initiated. Plans and funding for the open space, trails, and other components of the South and East Beltway multi-use corridors should be established as soon as possible.

ANTELOPE VALLEY ROADWAY PROJECT

The Antelope Valley Roadway Project involves a partnership of the City of Lincoln, the Lower Platte South Natural Resource District and the University of Nebraska-Lincoln. Initiated in the early 1990's, this effort was designed to address the concerns of traffic/pedestrian circulation, community revitalization needs, and storm water drainage and flood control associated with a portion of the Antelope Creek drainage basin.

The Antelope Valley Roadway project envisions a multi-lane (four to six lanes) boulevard with ~~dual left~~ turn lanes and a landscaped center median. ~~T~~When complete, the first phase of implementation will include community revitalization elements, construction of the north/south roadway from approximately N. 14th Street and Salt Creek south to K Street, construction of the east-west diagonal road from the 9th/10th Street connection to a point east of 27th Street, and construction of the storm water and flood control elements. The overpass for the Burlington Northern-Santa Fe railroad tracks will be constructed to carry six lanes of through traffic, dual left turns and one right turn lane. Phase 1 of the "Draft Single Package" is under construction and considered a committed City project.

Implementation of the Antelope Valley Roadway project will be conducted through the Joint Antelope Valley Authority (JAVA), which includes representatives from all three of the study's original participants listed above.

"TWO PLUS CENTER TURN LANE" PROGRAM

As the community ~~looks for~~seeks low impact ways to minimize traffic congestion~~ on its streets, it is exploring means for completing street improvements that add capacity to the system~~ while preserving the character and viability of the ~~older neighborhoods. To achieve these objectives, the community is committed to an extensive~~ established neighborhoods and other components of the built environment, it renews its commitment to an essential program implementing the "two plus center turn lane" concept ~~across broad areas of~~in the ~~existing city~~" built environment."

Under this concept, designated arterial streets in ~~many older areas~~the "built environment" are ~~being~~to be improved with a street design that includes two through travel lanes and a single common center turn lane. This approach increases the street's efficiency to move traffic and improves safety, while minimizing the impacts on the adjacent neighborhood. This design can usually be accommodated within the existing right of way. The Comprehensive Plan recognizes that though occasionally small portions of right of way may need to be acquired in order to complete this program's objectives.

While all arterial rehabilitation projects should be done to a width that can accommodate two lanes plus a center turn lane, actual striping may vary depending on the particular neighborhood circumstance.

This program is considered a priority and is assumed to be fully in place well before the end of the planning period.

ADDITIONAL URBAN AREA SYSTEM IMPROVEMENTS

In addition to those projects described above, numerous other streets and roadway projects are identified for construction or programming during the 25 year planning period.

These projects will generally be the responsibility of the City of Lincoln, although participation from other governmental entities will occur.

These include a wide range of projects for which the City has already committed funds, as well as longer term projects that do not have specifically earmarked funding.

COMMITTED PROJECTS

~~Fletcher Avenue, Cornhusker Hwy (US-6) to 84th Street — 2 lanes + turn lanes~~
~~N. 66th St, "O" St to "Q" St, part of 'O' St. Project — 4 lanes + turn lanes~~
~~South 84th Street, Montello Rd. to Amber Hill Rd. — 4 lanes + turn lanes~~

Pioneers ~~Blvd~~Boulevard., S. 70th Street to S. 84th Street — 4 lanes + turn lanes

~~Old Cheney Road, 70th St. to 84th Street — 4~~

Antelope Valley Phase I Projects

Antelope Valley P1, Big "T" Overpass, includes West Leg — 6 lanes + turn lanes

~~Pine Lake Road~~

Antelope Valley P1, North/South Roadway, ~~40th~~"Y" St. to Vine Street ~~to Nebraska Hwy 2~~ — ~~4~~ 6 lanes + turn lanes

~~Pine Lake Road~~

Antelope Valley P1, North/South Roadway, ~~84th~~"Q" Street to ~~91st St. to 98th~~"K" Street — ~~4~~ 6 lanes + turn lanes

~~South 91st~~

Antelope Valley P1, East Leg, Overpass to west of N. 27th Street~~, Pine Lake Rd. to Nebraska Hwy 2~~ — ~~4~~ 6 lanes + turn lanes

~~South 56th~~

Antelope Valley P1, North/South Roadway, Vine Street~~, Old Cheney Rd~~. to ~~Pine Lake Rd.~~ "Q" Street — 4/6 lanes + turn lanes

~~South 40th Street, Pine Lake Rd. to Eagle Ridge Rd. — 4 lanes + turn lanes~~
~~South 27th Street, San Mateo Ln. to Yankee Hill Rd. — 4 lanes + turn lanes~~
~~South 14th Street, Old Cheney Rd. to Pine Lake Rd. — 4 lanes + turn lanes~~
~~West Fletcher Ave., NW 12th Street to NW 31st Street — 4 lanes + turn lanes~~
~~NW 27th Street, West Fletcher Ave. to US-34 Interchange — 2 lanes + turn lanes~~
~~North 10th St., Sun Valley Blvd. To Military Rd. — 4 lanes + turn lanes~~
~~Vine Street, 21st Street to 26th Street — 4 lanes + turn lanes~~
~~Highway 77 and Capitol Parkway West — Interchange~~
~~"A" Street and 3rd Street Overpass — Railroad Overpass~~
~~"O" Street, 3rd Street to 9th Street, Harris Overpass — Railroad Overpass~~
~~South 14th St./Warlick Blvd./Old Cheney Road — Intersection~~

Antelope Valley P1, "P", "Q", "O", "N", "J" and South Street — Bridges

Proposed Projects

~~**North 84th Street, US-6 to "O" Street — 6 lanes + turn lanes**~~
~~**North 98th Street, US-6 to Adams Street — 2 lanes + turn lanes**~~
~~**Fletcher Ave., 84th Street to East Beltway — 2 lanes + turn lanes**~~
~~**Havelock Ave., 84th Street to 98th Street — 2 lanes + turn lanes**~~
~~**Adams Street, 84th Street to 98th Street — 4**~~

W. Adams Street, NW. 70th Street to NW 48th Street — 2 lanes + turn lanes
~~Adams Street, 98th Street to East Beltway — 2 lanes + turn lanes~~
~~98th Street, Adams Street to Pine Lake Road — 4 lanes + turn lanes~~
~~112th Street, Holdrege to Van Dorn Street — 4 lanes + turn lanes~~

~~112th Street, Van Dorn Street to Pioneer Blvd~~	~~2 lanes + turn lanes~~
~~120th Street, "O" Street to Van Dorn Street~~	~~2 lanes + turn lanes~~
~~Holdrege Street, 84th Street to 98th Street~~	~~4 lanes + turn lanes~~
~~Holdrege Street, 98th Street to 112th Street~~	~~2 lanes + turn lanes~~
~~"O" Street, 72nd Street to 98th Street~~	~~6 lanes + turn lanes~~
~~"A" Street, 84th Street to 112th Street~~	~~4 lanes + turn lanes~~
~~"A" Street, 112th Street to 120th Street~~	~~2 lanes + turn lanes~~
~~Normal Blvd., 56th Street to Van Dorn Street~~	~~4 lanes + turn lanes~~
~~Van Dorn Street, Normal Blvd. to 80th Street~~	~~4 lanes + turn lanes~~
~~Van Dorn Street, 84th Street to 112th Street~~	~~4 lanes + turn lanes~~
~~Van Dorn Street, 112th Street to 120th Street~~	~~2 lanes + turn lanes~~
~~Pioneers Blvd., 84th Street to 112th Street~~	~~4 lanes + turn lanes~~
~~Pioneers Blvd., 112th Street to East Beltway~~	~~2 lanes + turn lanes~~
~~Old Cheney Road, 84th Street to 98th Street~~	~~4 lanes + turn lanes~~
~~Pine Lake Road, 98th Street to East Beltway~~	~~2 lanes + turn lanes~~
~~Yankee Hill Road, South 14th Street to Nebraska Hwy 2~~	~~4 lanes + turn lanes~~
~~South 84th Street, Amber Hill Rd. to Yankee Hill Rd.~~	~~4 lanes + turn lanes~~
~~South 84th Street, Yankee Hill Rd. to South Beltway~~	~~2 lanes + turn lanes~~
~~South 70th Street, Pine Lake Rd. to South Beltway~~	~~4 lanes + turn lanes~~
~~South 56th Street, Pine Lake Rd. to Yankee Hill Rd.~~	~~4 lanes + turn lanes~~
~~South 56th Street, Yankee Hill Rd. to Saltillo Rd.~~	~~2 lanes + turn lanes~~
~~South 40th Street, San Metro Lane to Saltillo Rd.~~	~~4 lanes + turn lanes~~
~~South 27th Street, Yankee Hill Rd. to South Beltway~~	~~4 lanes + turn lanes~~
~~Rokeby Hill Road, 27th Street to 40th Street~~	~~4 lanes + turn lanes~~
~~Rokeby Hill Road, 40th Street to 84th Street~~	~~2 lanes + turn lanes~~
~~Saltillo Road, 70th Street to 84th Street~~	~~2 lanes + turn lanes~~
~~Saltillo Road, 27th Street to 70th Street~~	~~4 lanes + turn lanes~~
~~Saltillo Road, US-77 to 27th Street~~	~~2 lanes + turn lanes~~
~~Yankee Hill Road, 1st Street to SW 12th Street~~	~~2 lanes + turn lanes~~
~~South 14th Street, Garrett Ln., to Yankee Hill Road~~	~~4 lanes + turn lanes~~
~~South 1st Street, West Denton Rd. to Yankee Hill Rd.~~	~~2 lanes + turn lanes~~
~~West Denton Road, US-77 to Coddington Rd.~~	~~4 lanes + turn lanes~~
~~Coddington Road, US-77 to West Denton Rd.~~	~~4 lanes + turn lanes~~
~~SW 12th Street, Yankee Hill Rd. to Pioneers Blvd.~~	~~2 lanes + turn lanes~~
~~Folsom Road, Pioneers Blvd. to West Denton Rd.~~	~~4 lanes + turn lanes~~
~~Old Cheney Road, SW 12th Street to Coddington Rd.~~	~~2 lanes + turn lanes~~
~~Old Cheney Road, Highway 77 to S.W. 12th St.~~	~~2 lanes + turn lanes~~
~~West Pioneer Blvd., US-77 to Coddington Rd.~~	~~2 lanes + turn lanes~~
~~Folsom Road, Van Dorn Street to Pioneers Blvd.~~	~~2 lanes + turn lanes~~
~~West Van Dorn, Coddington Ave to SW 40th St.~~	~~2 lanes + turn lanes~~
~~West Van Dorn, US-77 to Coddington Ave.~~	~~4 lanes + turn lanes~~
~~Nebraska Hwy 2, Van Dorn Street to 40th Street~~	~~6 lanes + turn lanes~~
~~SW 40th Street, Van Dorn Street to "O" Street~~	~~4 lanes /Overpass~~
~~West "A" Street, SW 40th Street to Coddington Rd.~~	~~2 lanes + turn lanes~~
~~Hobson Yard Overpass, "O" St to W. Capital Pkwy~~	~~4 lanes/Overpass~~
~~NW 48th Street, West "O" Street to US-34~~	~~4 lanes + turn lanes~~
~~NW 56th Street, West "O" Street to West Adams Street~~	~~2 lanes + turn lanes~~
~~West~~W. Adams Street, NW~~-70th~~. 48th Street to NW ~~38th~~38th Street	2 lanes + turn lanes
~~North 1st Street, Cornhusker Hwy to Superior Street~~	
Adams Street, N. 75th Street to N. 84th Street	2 lanes + turn lanes
Adams Street, N. 84th Street to N. 98th Street	4 lanes + turn lanes
~~North 14th Street, Superior Street. to Alvo Rd.~~	
Adams Street, N. 98th Street to East Beltway	2 lanes + turn lanes

Arbor Road, N. 27th Street to N. 70th Street	4 lanes + turn lanes
North 48th Street, Holdrege	
Alvo/Arbor, N. 14th Street to Leighton Ave.N. 27th Street	4 lanes + turn lanes
North 48th Street, Fremont Street to Doris Bair Rd.	4 lanes + turn lanes
NW 12th Street, Highlands Blvd. to Alvo Rd.	4 lanes + turn lanes
Fletcher Ave., N. 14th St. to N. 27th St.	4 lanes + turn lanes
West Fletcher Ave., N.	
W. 27th St. to N.W. 31st St.	2 lanes + turn lanes
Alvo Road, NW 27th Street to NW 12th Street	2 lanes + turn lanes
W. Alvo Road, NW 12th Street to Arbor Rd.N. 1st Street	4 lanes + turn lanes
North	
Alvo Road, N. 1st Street, US-34 to Alvo Rd.N. 7th Street	4 lanes + turn lanes
Humphrey Ave., N. 1st St to N. 14th St	2 lanes + turn lanes
Pennsylvania, N 1st to N 14th Street	2 lanes + turn lanes
Arbor Rd., Alvo Rd. to North 84th Street	
Alvo Road, N. 7th Street to N. 14th Street	4 lanes + turn lanes
North 70th Street, US-6 to Arbor Rd.	
Alvo Road, N. 98th Street to 1/4 mile east of N. 120th	2 lanes + turn lanes
Antelope Valley P2, Adams Street, 35th St. area over 33rd to Huntington Ave.	AV 4 lanes + turn lanes
Antelope Valley P2, Ant.Valley Rdwy, N/O Corn. Hwy. to Superior, Salt Creek.Bridge	AV Bridge
Antelope Valley P2, Huntington Ave., P1 connection to N. 33rd Street	AV 4 lanes + turn lanes
Antelope Valley P2, Hunt. Ave., P1 connection to N. 33rd St., RR Rdwy Underpass	Underpass
Antelope Valley P2, P1 East Leg Project End to N/O US-6 (Cornh. Hwy)	AV 6 lanes + turn lanes
Antelope Valley P2, P1 N/O US- 6 (Cornh. Hwy) to Superior Street	AV 4 lanes + turn lanes
Antelope Valley P2,N. 33rd St. US-6 to Huntington Ave. RR Rdwy Underpass	Underpass
W. "A" Street, SW. 40th Street to Coddington Avenue	2 lanes + turn lanes
"A" Street, S. 112th Street to S. 120th Street	2 lanes + turn lanes
"A" Street, S. 84th Street to S. 112th Street	4 lanes + turn lanes
North 84th Street	
S. Coddington Avenue, Arbor Rd.US.-77 to US-6Denton Road	4 lanes + turn lanes
US-34 and NW 12th Street Overpass	Overpass
Cornhusker Hwy and North 14th Street Interchange	Interchange
NW 70th Street, W Adams to W Superior	
US-6 (Cornh. Hwy), I-80 Exit 399 to I-80 Exit 409	6 lanes + turn lanes
W. Cummings Street, NW 56th Street to NW 48th Street	2 lanes + turn lanes
Huskerville Link: West Superior	
W. Cummings Street, NW 70th to West Cuming48th Street to NW 38th Street	2 lanes + turn lanes
NW 40th Street and Interstate 80 Grade Separation	Grade Separation
NW 40th Street, West "O" Street to West Adams	
W. Denton Road, Coddington Avenue to Folsom Street	4 lanes + turn lanes
Denton Road, S. Folsom Street to US-77	4 lanes + turn lanes
East Beltway, I-80 to Hwy-2, " Corridor Protection"	Freeway Corr. Protection
East Beltway, I-80 to Hwy- 2,	Freeway
W. Fletcher Avenue, NW 31st Street to NW 27th Street	4 lanes + turn lanes
W. Fletcher Avenue, NW 27th Street to NW 13th Street	additional 2 lanes
Fletcher Avenue, N. 14th Street to Tellride Drive	4 lanes + turn lanes
Fletcher Avenue, US-6 to N. 84th Street	2 lanes + turn lanes
NW 38th Street, West Cuming to West Webster to NW 31st Street to US Highway 34	
Fletcher Avenue, N. 84th Street to East Beltway	2 lanes + turn lanes
West Holdrege, NW 56th	
S. Folsom Street, Pioneers Boulevard to Denton Road	4 lanes + turn lanes
S. Folsom Street, W. Van Dorn Street to Pioneers Boulevard	2 lanes + turn lanes

Havelock Avenue, N. 70th Street to N. 84th Street	2 lanes + turn lanes
Havelock Avenue, N. 84th Street to N. 98th Street	2 lanes + turn lanes
Hwy-2, S 84th Street to East Beltway, "Corridor Preservation"	Corridor Preservation
Hwy-2, Old Cheney Road to S. 84th Street	6 lanes + turn lanes
Hwy-2, Van Dorn Street to Old Cheney Road	6 lanes + turn lanes
W. Holdrege Street, NW 56th Street to NW 48th Street	2 lanes + turn lanes
~~US-77/West Beltway Upgrade to Freeway Status from I-80 to South Beltway~~	~~Upgrade to Freeway~~
~~Construct new interchange at Pioneers Blvd.~~	~~Interchange~~
~~Construct new interchange at Warlick Blvd.~~	~~Interchange~~
~~Close access to US-77 at Rokeby Rd, Yankee Hill Rd., and Old Cheney Rd..~~	~~Access Closure~~

Holdrege Street, N. 86th Street to N. 98th Street	4 lanes + turn lanes
Holdrege Street, N. 98th Street to N. 112th Street	2 lanes + turn lanes
Normal Boulevard, S. 58th Street to Van Dorn Street	4 lanes + turn lanes
US-34 ("O" St.), Antelope Valley N/S Rdwy. (19th St.) to 46th Street	6 lanes + turn lanes
US-34 ("O" St), Wedgewood Drive to 98th Street	6 lanes + turn lanes
W. Old Cheney Road, Coddington Avenue to SW 12th Street	2 lanes + turn lanes
W. Old Cheney Road, SW 12th Street to US-77	2 lanes + turn lanes
Old Cheney Road, Parkridge Circle to S. 82nd Street	4 lanes + turn lanes
Old Cheney Road, S. 88th Street to S. 98th Street	4 lanes + turn lanes
Pine Lake Road, S. 57th Street to Hwy-2	4 lanes + turn lanes
Pine Lake Road, S. 84th Street to S. 91st Street	4 lanes + turn lanes
Pine Lake Road, S. 91st Street to S. 98th Street	4 lanes + turn lanes
Pine Lake Road, S. 98th Street to East Beltway	2 lanes + turn lanes
W. Pioneers Boulevard, Coddington Avenue to SW 12th Street	2 lanes + turn lanes
W. Pioneers Boulevard, SW 12th Street to US-77	2 lanes + turn lanes
Pioneers Boulevard, S. 86th Street to S. 98th Street	4 lanes + turn lanes
Pioneers Boulevard, S. 98th Street to S. 112th Street	4 lanes + turn lanes
Pioneers Boulevard, S. 112th Street to East Beltway	2 lanes + turn lanes
Rokeby Road, S. 27th Street to S. 40th Street	4 lanes + turn lanes
Rokeby Road, S. 40th Street to S. 56th Street	2 lanes + turn lanes
Rokeby Road, S. 56th Street to S. 84th Street	2 lanes + turn lanes
Saltillo Road, US-77 to S. 27th Street	2 lanes + turn lanes
Saltillo Road, S. 27th Street to S. 40th Street	4 lanes + turn lanes
Saltillo Road, S. 40th Street to S. 56th Street	4 lanes + turn lanes
Saltillo Road, S. 56th Street to S. 70th Street	4 lanes + turn lanes
Saltillo Road, S. 70th Street to S. 84th Street	2 lanes + turn lanes
South Beltway, US-77 to Hwy-2	Freeway
US-6 (Sun Valley Blvd.), Cornh.Hwy(US-6) to W "O" St.(US-6), including R.R Overpass	4 lanes + turn lanes
Sun Valley Blvd. Extension, US-6 to Capital Parkway West , including Overpass	4 lanes + turn lanes
W. Superior Street, NW 70th Street to NW 56th Street	2 lanes + turn lanes
W. Van Dorn Street, SW 40th Street to Coddington Avenue	2 lanes + turn lanes
W. Van Dorn Street, Coddington Avenue to US-77	4 lanes + turn lanes
Van Dorn Street, Normal Boulevard to S. 84th Street	4 lanes + turn lanes
Van Dorn Street, S. 84th Street to S. 112th Street	4 lanes + turn lanes
Van Dorn Street, S. 112th Street to S. 120th Street	2 lanes + turn lanes
W. Webster Street, NW 38th Street to NW 31st Street	2 lanes + turn lanes
W. Yankee Hill Road, SW 12th Street to S. 1st Street	2 lanes + turn lanes
Yankee Hill Road, S. 14th Street to S. 27th Street	additional 2 lanes
Yankee Hill Road, S. 40th Street to S. 56th Street	4 lanes + turn lanes
Yankee Hill Road, S. 56th Street to S. 70th Street	4 lanes + turn lanes
Yankee Hill Road, S. 70th Street to S. 84th Street	4 lanes + turn lanes
Yankee Hill Road, S. 84th Street to Hwy-2	4 lanes + turn lanes
NW 70th Street, W. Superior Street to W. Adams Street	2 lanes + turn lanes
NW 56th Street, W. Adams Street to W. "O" Street	2 lanes + turn lanes
NW. 56th Street, W. Cummings Street to W. Superior Street	2 lanes + turn lanes
NW 48th Street, US-34 to US-6	4 lanes + turn lanes
NW 40th Street, W. Holdrege Street to W. Vine Street	2 lanes + turn lanes
NW 40th Street, W. Vine Street to US-6, including I-80 Overpass	Overpass
SW 40th Street, US-6 to W. "A" St, Railroad Overpass & Middle Crk Bridge	Overpass
SW 40th Street, US-6 to W. "A" Street	4 lanes + turn lanes
SW 40th Street, W. "A" Street to W. Van Dorn Street	4 lanes + turn lanes

NW 38th Street, W. Cummings Street to W. Webster Street	2 lanes + turn lanes
NW 38th Street, W. Adams Street to W. Holdrege Street	2 lanes + turn lanes
NW 31st Street, W. Webster Street to US-34	2 lanes + turn lanes
NW 12th Street, W. Alvo Road to Fletcher Avenue	4 lanes + turn lanes
NW 12th Street, W. Alvo Road to Fletcher Ave., US-34 Overpass	Overpass
NW 12th Street, W. Fletcher Avenue to Highlands Boulevard	additional 2 lanes
SW 12th Street, W. Pioneers Blvd. to Yankee Hill Road	2 lanes + turn lanes
N. 1st Street, Alvo Road to US -34	4 lanes + turn lanes
N. 1st Street, Benton Street to W. Dawes Avenue	4 lanes + turn lanes
N. 1st Street, Superior Street to Benton Street	4 lanes + turn lanes
S. 1st Street, Denton Road to Yankee Hill Road	2 lanes + turn lanes
N. 10th Street, US-6 to Military Road, including Salt Creek Bridge	4 lanes + turn lanes
N. 14th Street, Alvo Road to Fletcher Avenue	4 lanes + turn lanes
N. 14th Street, Fletcher Avenue to Superior Street	4 lanes + turn lanes
N. 14th Street and US -6 , Interchange	Interchange
S. 14th Street, Garrett Lane to Yankee Hill Road	additional 2 lanes
S. 27th Street, Porter Ridge to Yankee Hill Road	4 lanes + turn lanes
S. 27th Street, Whispering Wind Boulevard to Rokeby Road	4 lanes + turn lanes
S. 27th Street, Rokeby Road to Saltillo Road	4 lanes + turn lanes
S. 40th Street, Yankee Hill Road to Saltillo Road	4 lanes + turn lanes
N. 48th Street, Doris Bair Circle to Superior Street	4 lanes + turn lanes
N. 48th Street, Superior Street to Fremont Street	4 lanes + turn lanes
N. 48th Street, Fremont Street to Greenwood Street (*)	4 lanes + turn lanes
N. 48th Street, Leighton Avenue to Holdrege Street	4 lanes + turn lanes
S. 56th Street, Old Cheney Road to Shadow Pine Drive	4 lanes + turn lanes
S. 56th Street, Thompson Creek Boulevard. to Yankee Hill Road	4 lanes + turn lanes
S. 56th Street, Yankee Hill Road to Saltillo Road	2 lanes + turn lanes
N. 70th Street, Arbor Road to US -6	4 lanes + turn lanes
S. 70th Street, Pine Lake Road to Yankee Hill Road	4 lanes + turn lanes
S. 70th Street, Yankee Hill Road to Saltillo Road	4 lanes + turn lanes
N. 84th Street, US-6 to US-34	6 lanes + turn lanes
S. 84th Street, Amber Hill Road to Yankee Hill Road	4 lanes + turn lanes
S. 84th Street, Yankee Hill Road to Saltillo Road	2 lanes + turn lanes
S. 91st Street, Pine Lake Road to Hwy-2	additional 2 lanes
N. 98th Street, US -6 to Fletcher Avenue	2 lanes + turn lanes
N. 98th Street, Fletcher Avenue to Adam Street	2 lanes + turn lanes
N. 98th Street, Adam Street to Holdrege Street	4 lanes + turn lanes
N. 98th Street, Holdrege Street to US-34	4 lanes + turn lanes
S. 98th Street, US-34 to "A" Street	4 lanes + turn lanes
S. 98th Street, "A" Street to Pioneers Boulevard	4 lanes + turn lanes
S. 98th Street, Pioneers Boulevard to Pine Lake Road	4 lanes + turn lanes
S. 98th Street, Pine Lake Road to Nebraska Highway 2	2 lanes + turn lanes
N. 112th Street, Holdrege Street to US -34	4 lanes + turn lanes
S. 112th Street, US -34 to Van Dorn Street	4 lanes + turn lanes
S. 112th Street, Van Dorn Street to Pioneers Boulevard	2 lanes + turn lanes
S. 120th Street, US -34 to Van Dorn Street	2 lanes + turn lanes
S. 14th Street and Hwy-2	Major Intersection Work
S. 14th Street / Warlick Boulevard / Old Cheney Road	Major Intersection Work
S. 27th Street and Hwy-2	Major Intersection Work
S. 40th Street / Normal Boulevard / South Street	Major Intersection Work
S. 56th Street / Hwy-2 / Old Cheney Road	Major Intersection Work
84th Street and US -34	Major Intersection Work

*The Planning Commission notes that there is existing housing on both sides of 48th Street and regrets the negative effect that this widening may have, but concludes that this relatively short segment needs to be widened since there are 4 lanes both north and south of this segment.

PROPOSED STUDIES

The following areas are designated for study to determine if any facility improvements or road closings will be planned for these locations:

- ~~Wild Rose Lane Study~~
- North 44th at ~~BNSFRR Closure~~
- ~~Community-Wide Mobility Review of those groups whose transportation and mobility needs are not being met today. Early in the planning effort, groups comprising this portion of Lincoln and Lancaster County's population should be identified, including unique transportation and mobility characteristics. The study should consider at a minimum alternative approaches for providing transportation services to these groups, level of service characteristics and funding options. The study is to be completed within approximately two years from the adoption of this Plan.~~
- ~~Beltways~~BNSF. RR
- Beltway and Fringe Arterial~~s~~ - Explore options for promoting the maximum utilization by local traffic of the west, south, and east ~~b~~Beltway~~s~~, Interstate 80, and major urban fringe arterial~~s~~ in order to minimize the impact of future traffic growth on existing interior roadways~~.~~
- ~~There should be a community-wide review identifying near- and long-term multi-modal transportation and mobility opportunities for Lincoln and Lancaster County. The study should consider alternative approaches to providing personal transportation services, possible characteristics of service levels, and funding options best serving our community objectives. The study should be completed within approximately two years of the adoption of this Plan.~~
- within the built environment.
- North 70th to North 84th Street~~s~~ and ~~Cornhusker Highway~~Havelock Ave. to Bluff Road Area Study.
- Highway 2 Corridor Study from 9th Street to ~~66th Street~~
- 84th Street, including grade separations.
- Cornhusker Highway Corridor Study from I-80 Exit 399 to I-80 Exit 409, including grade separations.
- 98th Street and Highway 2 Area Study, including grade separation.
- A study that encompasses the general area bounded by NW 48th Street and NW 27th Street, West Webster to ~~US Highway 34~~US-34. The study is to include north/south and east/west roadway needs and alignments, including the West Fletcher corridor and ~~US Highway 34~~US-34 access considerations.
- As part of the US-77/West Beltway freeway project, study for a potential overpass at US-77 and Old Cheney Road and Rokeby Road. The study is to be a joint State/County/City feasibility study, including a traffic analysis, a citizen participation element, an appropriate environmental review, and will be started no later than one year prior to the contract letting of the West Bypass freeway upgrade. The study will comply with FHWA procedures for Federal Aid projects and will attempt to maintain an Old Cheney connection to 1st Street. (Study for a potential overpass at Rokeby Road has been approved by the County Board only.)

NEBRASKA HIGHWAY ~~-~~ 2 CORRIDOR PRESERVATION

Nebraska Highway 2 is a major existing link on the urban street network. This diagonal roadway carries significant traffic volumes today and is projected to remain as the busiest thoroughfare along the city's southern tier.
As an existing State Highway, the public right-of-way along this corridor as it runs through Lincoln varies widely — from ~~roughly 150~~150 to 350 feet in width~~, up to nearly 350 feet~~. The Long Range Transportation Plan calls for widening Nebraska Highway 2 from four to six through lanes ~~for an area~~ from ~~approximately~~ Van Dorn Street on the west, through the intersection of ~~South 56th /Old Cheney Road on the east.~~
84th Street on the east.

The Plan calls for looking at the feasibility of installing grade separations along Hwy-2 at existing at-grade intersections. As traffic volumes continue to increase along the corridor, intersection operations will continue to degrade. In order to maintain safety and efficiency, grade separations may become necessary.

Conflicts currently exist between local commuter traffic and highway truck traffic. The South Beltway, when completed, will become Hwy-2 and will be the official truck route. Existing Hwy-2 will become a City/County street. When the South Beltway is opened, policies should be implemented to deter through truck traffic.

Though no projects are shown in the Plan for the area~~;~~, the existing corridor along Nebraska Highway 2 from ~~about South 56th /Old Cheney Road to, and~~84th Street through, the location of the future South and East Beltway interchange on ~~Highway~~Hwy- 2 should be protected and preserved. The roadway within the~~is~~ corridor could be further improved or the corridor could serve as a multi-modal or multi-use area in the future.

Corridor preservation should include retention of all property within the State's present right-~~-~~of-~~-~~ way ~~area~~, denial of any additional access points to the roadway, elimination of existing access points should such opportunities arise, and the acquisition of additional right-~~-~~of-~~-~~way should it become available.
~~Serious conflicts currently exist between local commuter traffic and highway truck traffic. The South Beltway, when completed, will become the official truck route instead of Highway 2. This will present the opportunity to shift "through" highway truck traffic off Highway 2. When the South Beltway is opened, policies should be implemented to deter through truck traffic, preserve the right-of-way corridor, and facilitate local traffic use on Highway 2.~~

RIGHT-~~O~~-OF-WAY CONSIDERATION~~S~~

Right-of-Way (ROW) widths for projects on the Year 20~~25~~30 Street~~,~~ and Highway Improvements Plan are displayed on the Right-of-Way Standards Map. ~~For existing and future arterial street projects appearing on this map, the right-of-way is generally 120 ft. in width for "2 Lanes + Center Turn Lane" (2+1) and "4 Lanes + Center Turn Lane" (4+1) projects, and 140 ft. in width for "6 Lanes + Center Turn Lane" (6+1) projects.~~

Projects occurring at the intersection of two arterial streets or at locations where right turn lanes are required will warrant the further dedication of public ~~right-of-way~~right-of-way up to 130~~ft.~~feet in width for the "2+1 at 120 ~~ft.~~feet of ROW" and "4+1 at 120 ~~ft.~~feet of ROW" projects, and 150 ~~ft.~~feet in width for the "6+1 at 140 ~~ft.~~feet of ROW" projects, for a distance extending two blocks from the centerline (approximately 700 ~~ft.~~feet) of the intersection. The length of the intersection improvement should consider the existing and proposed land uses in the general area, traffic studies, and other pertinent information. Signalized intersections occurring along an arterial but not crossing another arterial may also fall under these ROW standards. The standard applies when land uses or other factors demonstrate the need for a wider right-of-way at the location.

Within Lincoln's future growth Tiers I, II and ~~II~~ III, a public right-of-way (ROW) width of 120 ~~ft.~~feet for any potential future arterial street is considered the ~~desired~~ standard for this Plan. This ~~is assumed to~~may include~~—~~- but is not necessarily limited to ~~—~~the existing section and half-section line roads in these future growth Tiers. Any ROW obtained to extend or otherwise complete the section line road system in the future growth area should also be done at this ~~desired~~ standard.

There are instances — mostly but not always in newer areas — where trails are to be placed along an arterial street. This may occur in order to provide trail connections and to allow safe trail crossings at arterial streets. When a future trail or bike lane is designated along an arterial roadway then the corridor should be expanded by six (6) additional feet on the side where the trail will be located. The~~is~~ additional right-of-way should be obtained in advance of development.

Within the ~~older established~~"built environment" area~~s~~ of the city, 66 ~~foot~~feet of rights-of-way are typical. This is normally adequate for a two lane or a two plus center turn lane street design, which is typically 33 feet wide (back of curb to back of curb). Where impacts from even minor widening would be significant, 31 feet (back of curb to back of curb) is an acceptable width.

COUNTY RURAL ROAD SYSTEM

Improvements to the rural road system will occur throughout the county. The amount of new pavement installed will depend upon the growth in traffic and population, and the fiscal resources available in the future to make the improvements.

The future County Paved Road Network is subject to extreme impacts from the more dense development (close to the City) to those roads experiencing slow to moderate growth (generally outside the three mile limit). These impacts and the resulting improvements vary from simply grading and graveling a road to a 4-lane facility.

Road improvements for the County are triggered based upon daily traffic volumes with the amount of traffic dictating the type and degree of improvement necessary.

The first level of traffic volume is in the range of 300 vehicles per day. At this level, the County acquires a minimum of 100 feet of right of way, with additional ROW acquisition standards applying as appropriate. Once the ROW is acquired, the County then grades and installs new drainage structures. The process of grading and graveling provides a road profile that is safer and wider. This profile can accommodate the next level of improvement, which would be pavement, provided the traffic counts continue to increase to the second level.

The acquisition of the ~~wider~~required right-of-way will also preserve the future corridors for the larger and more expansive street improvements that will come with the growth of Lincoln. The second level of improvement, which is pavement, is triggered at a traffic volume level of about 400 vehicles per day. This second level should remain as an effective transportation facility, with the exception of routine maintenance and pavement overlays, until the traffic volumes reach the level of 6,000 vehicles per day. This final level would be the target for looking at the need to install a four-lane divided facility.

The County Road Plan indicates some "road widenings" for those existing two lane paved roads that are no longer adequate for today's traffic volumes. The County's road improvement plan also includes new railroad viaduct~~s~~ planned near Hickman ~~and Firth~~ to address increasing competition at rail crossings from both rail and vehicular traffic. New roadway openings included in this Plan provide for continuity in the road system and better serve the adjacent areas. These segments include:

- 98th Street, A Street to "O" Street
- 98th Street, "O" Street to Holdrege Street
- 98th Street, Adams Street to Fremont Street
- 112th Street, Pine Lake Road to Yankee Hill Road

This brief explanation of County road improvements and the different levels of traffic volumes that trigger those improvements is an attempt to show that, generally, there exists a fairly orderly approach to project planning, programming and completion of the appropriate improvement.

This methodical approach does, however, become threatened when development precedes the improvements and becomes the controller of priorities and the limited fiscal resources available for road improvements. New development should locate along those facilities that have already received improvements capable of supporting such development. The Future County Road Improvements Plan shows county roads which are candidates for paving in the future.

A new program adopted in 2006 is the Rural-to-Urban Transition for Streets (RUTS). Lancaster County and the City of Lincoln agree it is mutually beneficial to provide better transition from county roads located within the three mile zoning jurisdiction of the City to City streets at the time of annexation. This process provides a more useful life from the public investment in these county roads while at the same time accommodating future growth of the city by

establishing right-of-way and construction standards to allow these county roads to transition from rural to urban standards without disruption to the existing through traffic and the surrounding property.

FINANCIAL ANALYSIS

Financing sources for current and planned roads and streets are chronically inadequate.

Federal transportation planning regulations call for Long Range Transportation Plans to, "include a financial plan that demonstrates the consistency of proposed transportation investments...with already available and projected sources of revenues."

This standard – some times referred to as the "fiscal constraint requirement" – ensures a balance between the costs of proposed transportation projects in the long range plan with likely funding sources. This standard minimizes the potential for infrastructure programs being adopted that are not likely to be implemented.

As part of this comprehensive planning process, the Lincoln Public Works and Utilities Department completed a detailed review of the financial requirements needed to undertake the City's ~~road~~transportation improvements. These figures show ~~a~~the projected ~~twenty-five year revenue stream of approximately $1,100 million. The companion figure for the cost portion of the Plan is around $1,482 million. While there is projected imbalance of around $382 million over the entire planning period, it is expected that this difference will be accounted for through a combination of financing and capital improvement programming options.~~
revenues and expenses of $2.43 billion respectively.

These options involve a number of additional revenue sources ~~(~~potentially including ~~local street impact fees currently being pursued by the City but as yet unapproved, and~~proposed State gasoline and City sales tax increases along with discretionary Federal and State funds likely requiring the submittal of project specific requests~~)~~ and the staging of improvements allowing for the incremental construction of road improvements. The combination of these factors is projected to allow for the eventual construction of the roadway program as shown in this Plan.

In the event that actual revenues fall short of projected levels, the City will need to determine which of the projects currently shown in the LRTP will be constructed after 2030. This determination will be based upon the direction the community is growing, demand for types of land uses, limitations on how certain funds may be used, and the impact of these factors on near term and long term transportation and development needs. It is envisioned that an annual determination for roadway priority that coincides with available funding will be required throughout the planning period. Therefore, the proposed roadway improvement projects identified in the LRTP should be considered as illustrative and subject to an annual determination for an implementation priority. Also, every effort will be made to leverage Federal and State Funds to augment the available local funds. Regardless of any potential funding shortfall, the City is committed to funding the operations, maintenance and rehabilitation of the existing street system.

2030 Long Range Transportation Plan
Revenues/Expenditures

DRAFT 090506

Projected Revenues	Millions of Dollars
1. City Road Funds (WC, WR, RR, HB, GR, IF 5% inflation factor after FY12, SO 1% inflation factor prior to adding LB904 dollars)	$ 1,065
2. Federal Highway Funds (BR funds, PC funds no inflation factor, FA funds after 5th year constant with no inflation, CMAQ funds constant after 2nd year with no inflation, PP funding source only identified in 6 year plan.)	$ 430
3. Other State/Federal Aid (SF and TM funds no inflation factor)	$ 7
4. Other Funds (RTSD funds with 5% inflation factor)	$ 145
Sub-Total	$1,647
5. State/Federal Projects (No City Funds)	$ 308
Sub Total including State project funding	$1,955
6. New Funds $ 480 (Proposed increases of ½ cent City sales tax and 4 cents State gasoline tax)	
Projected Revenue Total All Funds	$2,435

Projected Expenditures	Millions of Dollars
7. Operations & Maintenance Activity (includes street sweeping, snow removal, street maintenance & management/debt service)	$ 562
8. City Share of Projects (includes Resurfacing/Rehabilitation and other amenities) (Roadway project estimates are 2004 year dollars non inflated)	$ 1,565
Sub-Total	$ 2,127
9. State/Federal Share of Projects (80% S. Beltway, I-80, W & E "O" St., Hwy. 34, Hwy. 77 Interchange and Intersection Closures, 80% Sun Valley Blvd.)	$ 308

Projected Total Expenditures All Funds	$ 2,435

INTELLIGENT TRANSPORTATION ~~SYSTEMS~~

~~Intelligent Transportation Systems (ITS) integrate computers, electronic technology, sensors, telecommunication equipment, and management practices into the daily operations of a community's road and transit systems. In part, ITS is about gathering real-time traffic information, allowing traffic engineers and transit managers to analyze the information, and then taking appropriate actions to make sure the drivers and bus riders get the most out of the total transportation system. For example, it's been estimated that advanced traffic surveillance and signal control systems alone could result in travel time savings of 8 to 25 percent. In short, ITS is intended to enhance a community's overall level of mobility – ensuring the safe, convenient, and efficient movement of people and goods.~~

~~Federal ITS Mandate and Local Agency Roles~~

~~The Federal Transportation Efficiency Act (TEA-21) mandates local communities to consider and include ITS approaches in their transportation planning process. For purposes of the Lincoln Metropolitan Planning Organization (MPO), this document and the process followed in its development and implementation are designed to serve this requirement.~~

~~In guiding this task, it is the~~system

A stated mission of the Lincoln MPO is "to advance the development and application of ~~Intelligent Transportation Systems~~ITS across the region, which will increase highway safety, mobility, security, economic health and community development, while preserving the environment."~~ This statement of purpose is also intended to support the Lincoln area's contribution to the deployment of ITS technology by the State of Nebraska. The primary local players in planning Lincoln's ITS program are the~~

The City of Lincoln ~~Public Works and Utilities Department (including the local transit operator, StarTran), the Lancaster County Engineer, and the Lincoln City-Lancaster County Planning Department. The relative roles of these agencies in the ITS planning process depend upon the existing and anticipated future demand for ITS user services within the urbanized area and the involvement and expertise of other local public and private operations.~~

~~The role of the local participants is to include:~~

~~• Maintaining an inventory of current ITS projects and applications~~
~~• Collecting and managing pertinent system data~~
~~• Serving as a clearinghouse for local ITS databases~~
~~• Conducting system performance monitoring and reporting~~
~~• Working with ITS stakeholders to provide a forum for their participation~~
~~• Participating in the updating of the Nebraska ITS Strategic Plan and Regional/Local ITS Architecture~~
~~• Coordinating ITS program funding~~
~~• Identifying potential public-private and public-public ITS relationships~~
~~• Establishing priorities for ITS project programming and funding within the~~/ MPO since the early 1970's has stayed at the cutting edge of Transportation ~~Improvement Program (TIP) process~~
~~• Ensuring project conformity with regional (state) and national ITS architecture and standards~~

~~**ITS DEPLOYMENT STRATEGY**~~

~~The transportation system served by the Lincoln area's ITS program consists of a diverse set of users: vehicle drivers, pedestrians, bicyclists, multi-modal passengers, freight and passenger fleet operators, and other network participants. The potential solutions that can meet the needs of these users are similarly diverse. These solutions can be grouped into eight functional areas:~~

~~• Travel and Traffic Management~~
~~• Public~~Technology, by deploying Generation-1 of the Computerized Traffic Control System and its associated communication infrastructure. Today Lincoln MPO's Intelligent Transportation ~~Management~~
~~• Electronic Payment~~
~~• Commercial Vehicle Operations~~
~~• Emergency Management~~
~~• Advanced Vehicle Safety Systems~~

~~• Information Management~~
~~• Maintenance and Construction Operations~~
~~The Lincoln Public Works and Utilities Department currently manages a Travel and Traffic Management System that includes approximately 350 traffic signals, 85 miles of communication lines (twisted pair copper or fiber optic), 11 portable~~Systems (ITS) capabilities include video detection & monitoring; pavement & weather monitoring stations; dynamic message signs~~, 7 traffic monitoring cameras (5 are candidates for wireless communication technology application), 6 pavement and weather monitoring sensors, and about 130 intersections with fire and railroad pre-emotion units.~~
~~The further deployment of ITS technologies over the planning period includes the refinement of the Federally specified "ITS Integration Strategy" including the continued implementation of appropriate user services within priority corridors. This will be based upon user needs and demand. At a minimum, ITS~~, state of the art traffic signal components to ultimately achieve a real-time traffic responsive system; emergency vehicle & railroad preemption devices; a hybrid communication system including fiber optic, broadband radio, and twisted pair cable; automated speed detection and display.

The Regional ITS Architecture for Southeast Nebraska, a requirement of TEA-21 was contracted for and managed by the City of Lincoln / MPO in close consultation with Federal Highway Administration (FHWA), Federal Transit administration (FTA), Nebraska Department of Roads (NDOR) and Lancaster County. The final version of the Architecture was reviewed by FHWA and FTA and on 08/09/2005 was found to be consistent with their respective 'Final Rule' and 'Policy' on ITS Architecture and Standards.

The overall objective of the ITS Architecture project was to ensure that ITS investment in Southeast Nebraska, a thirteen county coalition, has common communication protocols; to avoid duplication of non-collaborative investments in infrastructure, including hardware and software; to provide the ability to share data between agencies; and to bring the region into compliance with the nationally established ITS Standards and Architecture.

A critical component of this Architecture was the stakeholder and community outreach program. This program was successful in involving over 300 individuals representing various public agencies in the region. As a result of this effort, we now have the ability and support to pursue funding and implementation of approximately 39 ITS projects. These projects are expected to enhance the safety, security, operations and economic well being of our residents and communities. The regional Architecture successfully integrates the Urban and Rural needs of this progressive region of Southeast Nebraska. It is anticipated that this outreach effort and Architecture maintenance, project funding and project implementation will ~~likely involve additional traffic monitoring cameras, dynamic message signs, vehicle detection, new communication infrastructure, and other advanced traffic control systems. How the traveling public responds to these techniques will be used to determine future ITS projects and system enhancements.~~

~~**BROADENING ITS WITHIN THE MPO TRANSPORTATION PLANNING PROCESS**~~
~~A variety of approaches is to be used to ensure that ITS has a meaningful, beneficial, and permanent place in the MPO transportation planning process. This includes means for involving the community and seeks consensus for ITS project selection and development. Among the strategies to be pursued are:~~
~~• Creating an ITS Subcommittee of the MPO's Technical Committee~~
~~• Promoting ITS through presentations to other public agencies and business and community organizations~~
~~• Developing partnerships with~~continue and expand to also include the private sector ~~to identify and implement ITS strategies~~
~~• Communicating with elected officials and others administrators to secure ITS commitments for cooperation, funding, and on-going support~~
~~• Reviewing non-ITS actions during the project development process to ensure their consistency with ITS objectives~~
~~• Maintaining a "customer oriented" philosophy as~~. These activities are anticipated to occur throughout the 25 year planning period.

The 2005 Regional ITS Architecture report was approved and adopted by the Lincoln MPO and will remain an

integral part of the ~~delivery of ITS services~~
~~• Incorporating ITS work tasks into job duties and functions~~

~~**SYSTEMS MANAGEMENT STRATEGY**~~
~~On June 9, 1998, Congress enacted the~~2030 Long Range Transportation ~~Equity Act for the 21st Century – also know as TEA-21. This legislation covers all Federal highway and transit systems for the six-year period from 1998 to 2003. It requires Transportation Management Areas (TMA) to design and implement a management system as part of the transportation planning process.~~

~~TRANSPORTATION MANAGEMENT AREAS~~

~~TEA-21 requires the U.S. Secretary of Transportation to designate any urbanized area with a population of over 200,000 people as a Transportation Management Area.~~

~~Although the Lincoln-Lancaster County region has yet to be designated as a TMA, this is likely to occur when the results of the year 2000 Census are finalized for this purpose. Based on discussions with representatives from FHWA and FTA, Lincoln's designation as a TMA is not likely to occur until the Spring of 2002 at the earliest. However, since it is evident that a TMA designation will occur within the time frame of the LRTP's implementation, the region has elected to include TMA requirements in the development of the LRTP.~~

~~One of these requirements calls for the creation of a "management system" as part of the transportation planning process. This management system is to provide for the "effective management of new and existing transportation facilities.....and operational management strategies." In practice, the management system should ultimately be a separate document that fulfills the requirements of the metropolitan planning regulations and management and monitoring system rules of TEA-21. As part of the LRTP document, a structure for establishing a management system in the future is included.~~

Plan.

TRANSPORTATION SYSTEM MONITORING & MANAGEMENT ~~PROGRAM~~

Effectively managing the metropolitan area's transportation system requires an ongoing program of monitoring and data collection.

~~This Plan recognizes the efforts of the Congestion Management Task Force during the mid-1990's and its contribution to the street planning process. The work of this citizen group has already resulted in many changes to the City's roadway network. These changes include physical improvements to the street system (e.g., the expanded use of the "2 plus center turn lane" street design), the way data are collected and evaluated, and the means for measuring the performance of City's roadway network.~~

~~The technical foundation provided by the Congestion Management Task Force has served the community well. It has resulted in a better understanding of the area's transportation and travel needs.~~

~~One notable contribution has been the travel time analysis program put in place as a result of the Task Force's efforts. This program began on a modest scale with the collection of average travel speeds along a handful of corridors. Since then, the program has been expanded to include large portions of the urban area.~~

~~The expanded~~ This monitoring and data collection program ~~allows~~is intended to provide the community ~~and transportation technicians to take a broader look at how Lincoln's street system is working. By examining changes in travel speed across large areas, system level improvements — rather than merely corridor level changes — can be assessed and then put in place. This system level approach to planning and engineering will form the basis for the next generation of evaluation procedures that further extend the work of the Congestion Management Task Force.~~

~~An annual~~with a balanced perspective on how well the overall transportation ~~report should be prepared by~~system is performing relative to the ~~MPO Technical Committee as part of the~~adopted Long Range Transportation Plan (LRTP) and the ~~Comprehensive Plan Annual Review process and delivered to the Planning Commission concurrent with the Planning Director's report on the Comprehensive Plan and the CIP requests. This analysis should critique the transportation system's performance and identify priorities for~~ future ~~projects and studies. This analysis should use the adopted LRTP and Comprehensive Plan as its beginning point of review. This should be supplemented with monitoring information collected specifically for this evaluative process. Recommendations of potential projects and studies for the continuing planning and capital improvements programming processes [i.e., Annual Work Program, City and County Capital Improvements Programs (CIP), and Transportation Improvement Program (TIP)] should be made part of this report.~~

~~**STREET SYSTEM STANDARDS**~~

~~The standards used to evaluate the performance of the urban street system (a.k.a., level of service (LOS)) should include a range of factors. They should reflect the varying character of areas within the community, with standards acknowledging the differences between the older and newer parts of the City. The standards should be measurable, realistic, and easy to understand. Elements defining the level of service should address:~~

- ~~Average speed (MPH) across an entire travel corridor~~
- ~~Consistency of travel time~~
- ~~System connectivity~~
- ~~Safety (accidents)~~
- ~~Visual interest~~
- ~~Travel mode usage~~

~~*Strategies: Street System Standards*~~

- ~~Develop an expanded set of street and~~Land Use Plan.

Over the past several years, the measures used to monitor, evaluate, and manage the MPO's transportation system ~~standards for measuring "level of service" and network performance. These standards should build upon existing data collection and analysis practices, encompass a wide range of factors, and seek to broaden the perspective of how level of service and network performance is judged. This task should be given to the Intelligent Transportation Systems (ITS) Committee as one of their initial assignments.~~

~~**NETWORK MONITORING AND ANALYSIS**~~

~~In 1996,~~has been the subject of considerable dialogue between the community and staff - beginning with the Congestion Management Task Force ~~initiated a process to gather average travel speed and delay time along selected streets~~in the mid-1990s. This continuing dialogue has resulted in a variety of parameters being used to judge the performance of the transportation system. These include travel time, average speed, intersection delay, vehicle occupancy, traffic volumes, crash rates and other relevant measures. These measures remain an important statistical foundation upon which to build a valid process to evaluate and manage the overall transportation system.

TRANSPORTATION SYSTEM MONITORING AND EVALUATION

The City, County, and Lincoln MPO have a long tradition of monitoring the overall performance of its area-wide transportation system. As more sophisticated methods have become available, ~~the City of Lincoln has built upon and expanded this approach. The City now has in place an extensive, on-going~~these methods have been integrated into an ever evolving monitoring strategy. As such, an extensive on-going data collection program is already in place. This program collects data on a regular basis for virtually the entire ~~city~~City' major street network. ~~T~~, the ~~following information should be collected during both peak and off-peak conditions:~~

- ~~Travel time and average speed across entire corridors~~
- ~~Travel delay at intersections~~
- ~~Public~~County roadway system, and alternative transportation ~~usage~~
- ~~Vehicle occupancy~~
- ~~Accident rates~~
- ~~Pedestrian and bicycle volumes~~
- ~~Overall traffic volumes~~
- ~~Volume of truck traffic~~
- ~~Turning counts at intersections~~
- ~~Computer simulations~~

~~*Strategies: Network*~~modes.

Strategies: Transportation System Monitoring and ~~Analysis~~Evaluation

- Utilize ~~the~~an extensive array of ~~available~~ information, data, and ~~analysis~~ technologies to monitor and evaluate the performance of the ~~traffic and~~ transportation system on an annual basis.

~~• Add new~~

- Continue to routinely collect, evaluate, and publish pertinent information for peak and off-peak conditions:
  - Travel time and average speed across entire corridors
  - Travel delay at intersections
  - Public transportation usage
  - Vehicle occupancy (screen lines)
  - Crash rates
  - Pedestrian and bicycle volumes
  - Overall traffic volumes (24 hour mechanical)
  - Volume of truck traffic
  - Turning counts at intersection (a.m., noon, and p.m. peak hours)
  - Computer simulations
- Continue to develop methods to distribute real time travel information to the traveling public. Incorporate traffic monitoring cameras and dynamic message signs to aid in congestion management.
- Routinely update tools, data, and methods ~~as they become available~~ to aid in monitoring the transportation ~~network's~~system's performance.

~~**Maintaining**~~

URBAN STREET NETWORK STANDARDS

The standards used to evaluate the performance of the urban street network (a.k.a., Level of Service (LOS)) should include a range of factors. In approaching this task, the community desires to continue addressing street performance differently between the "built environment" and newly developing areas. The standards should reflect the varying character of different locations within the community and the desire to maintain the existing "feel" of the "built environment." The standards should strive to be measurable, realistic, and easy to understand. **Priority should be given to real-time measurements over model estimates**.

Strategies: Urban Street Network Standards

- Develop an expanded set of urban street network standards for measuring "level of service" and network performance. They should encompass a wide range of factors and seek to broaden the perspective of how level of service and network are judged. These standards are to be used in examining existing and projected (i.e. modeled) street network performance.
- The urban street network standards should build upon existing data collection and analysis practices, while striving to incorporate new and innovative information gathering and system monitoring technics.
- Elements aiding to define the urban street network level of service should address:
  - Average speed (MPH) across an entire travel corridor
  - Volume to capacity ratio
  - Delay
  - Consistency of travel time
  - System connectivity
  - Safety (crashes)
  - Access management
  - Visual interest (e.g. 3-D perspective)
  - Travel mode usage
- An access management document should be put together to educate and show the value and need for this program. This should help in supporting applicable standards for driveways and access points. The document should stress the importance of context sensitive design in managing and implementing roadway access standards. This includes respect for the unique character of the "built environment".

- An appropriately-scaled broadly-based community and agency participation process must be used in conducting any studies conducted by the MPO or by individual participating agencies. Such processes are expected to include community participation in scope of work definition, data analysis, alternatives evaluation, and the selection of recommendations. The overall monitoring and evaluation process will continue through out the planning period. It should seek the involvement of applicable stakeholders using a balanced and collaborative study approach. These studies will address impacts on the community, neighborhood, and the natural and built environments, as well as the overall transportation system and the future land use plan, including its core principals and objectives.

CONGESTION MANAGEMENT AND MITIGATION

Congestion management and mitigation should ~~be~~remain flexible and ongoing. ~~Appropriate public agencies should engage in continual evaluation and response to problems identified in the street system.~~ There should be a regular process in place to identify and respond to traffic congestion challenges. Many management and operational actions will be undertaken at the departmental level to provide the quickest possible resolution~~. M~~, while more serious ~~problems~~issues may require a formal study process.

~~The MPO Technical Committee will serve as the lead in the annual transportation system evaluation process. This task will be founded upon the transportation and land use planning policies and programs in the adopted City-County Comprehensive Plan and LRTP. This effort should be based upon documented data sources and on the full array of level of service standards. If system performance changes in the system are noted as part of this process, a determination should be made as to whether they are temporary or chronic in nature.~~

Strategies: Congestion Management and Mitigation

- Additional studies may be desirable to identify specific congestion mitigation strategies that appear most reasonable for the particular location. Where deficiencies are identified, the MPO Technical Committee may will suggest strategies for congestion mitigation. Strategies may include:
  - Intersection improvements
  - Additional turn lanes
  - Road improvements
  - Signalization improvements
  - Intelligent Transportation System (ITS) improvements
  - Transportation Demand Management (TDM) techniques
  - Alternative transportation modes

~~A broadly based community and agency participation process must be used in conducting any studies recommended through this process. This includes community participation in scope of work definition, data analysis, alternatives evaluation, and the selection of recommendations. The overall monitoring and evaluation process is considered an ongoing effort. It should seek the involvement of applicable stakeholders using a balanced and collaborative study approach. Any studies~~

- Studies or recommendations for congestion mitigation must address as a minimum the impacts on the following:
  - established neighborhoods
  - homes and businesses
  - pedestrian and bicycle safety
  - public and private trees
  - property values of the surrounding area
  - access to adjacent properties
  - cost of ROW and of purchasing properties
  - traffic noise
  - ~~accident~~ crash rates
  - budgetary constraints

~~Strategy: Maintaining Level of Service~~

• Establish a process for completing the annual evaluation of•

Traffic monitoring cameras should continue to be placed at key locations of the street network to monitor transportation activity on a daily basis. These real time camera images are an important tool for the transportation system (to include all aspects of the transportation system). This step in the process should be fully described in applicable planing procedural manuals and associated management documents.

professionals as well as a means to provide traveler information via the internet.

- Dynamic message signs should continue to be placed at appropriate locations to notify drivers of road closures and detours, allowing them to make better choices when determining their travel routes.
- Continue to develop methods to distribute real time travel information to the traveling public.

CONTINUING MONITORING AND PLANNING

Studies and improvements that require amendments to the

The monitoring and planning of the community's land use patterns and transportation systems is an integral part of a continuing process. This process involves the periodic examination of the City-County Comprehensive Plan, Capital Improvements Program (CIP), and/or Transportation Improvement Program (TIP) will be brought forward as part of the annual transportation report to be prepared by the MPO Technical Committee as part of the Long Range and Long range Transportation Plan (LRTP) and Comprehensive Plan Annual Review process. This analysis will assess the performance of the transportation network and will assist in the identification and prioritization of projects for inclusion in the LRTP, CIP, and TIP. Amendments to these two plans - as well as related capital improvement programs and other implementation documents - are an inescapable part of this process. Such amendments help insure these plans remain current, relevant, and practical.

Strategies: Continuing Monitoring and Planning

• Continue and expand the area's

- Develop and prepare an Annual Transportation Report. An Annual Transportation Report can provide a meaningful perspective on the performance of the overall transportation system and its relationship to the future land use plan. This Report is to be prepared under the auspices of the MPO Technical Committee and, as applicable, coordinated with any annual review of the City-County Comprehensive Plan. It shall be researched and authored by staff from a diversity of local, State and Federal agencies. The Report's conclusions and recommendations are to reflect a consensus of professional staff opinions regarding transportation and land use planning goals and practices. Recommendations may include proposals for further studies, specific projects, and/or text changes to this Plan.
- Acknowledge Transportation-Land Use Development Relationship. The success of transportation system initiatives and land use developments are closely related. Proposed changes in the City-County land use plan should be reviewed as part of the MPO's continuing monitoring and planning programprocess. This should involvewill allow for the closer integration of theexisting planning and capital improvements programming processes.

RAILROADS

The city and county are served by both freight and passenger rail service. There are currently a number of projects in the planning analysis, study, development or implementation stage which should reduce the rail/vehicular/pedestrian conflicts at street crossings. These projects include:

- ~~West "A" Street overpass at 3rd Street~~
- Antelope Valley Phase I roadway, elevated intersection (Big "X") in the vicinity of N. 16th Street and State Fair Road
- Antelope Valley Phase II North 33rd ~~and Adams~~ Street underpass at the BNSF rail corridor south of Cornhusker ~~Hwy~~
- ~~Closure of the grade crossing at the 35th Street, Adams Street~~ Highway.
- Antelope Valley Phase II at grade rail crossing closure, on Adams Street east of 35th Street. Road closures on Adams Street, between 33rd Street and BNSF rail line and intersection modification at 35th and Cornhusker Highway ~~intersection~~.
- ~~Closure of~~ BNSF rail crossing at 44th Street south of Cornhusker Hwy.
- ~~An~~ Antelope Valley Phase II roadway underpass at the BNSF rail corridor near N. 29th ~~St~~Street at Huntington ~~Ave~~Avenue.
- SW 40th Street roadway overpass at BNSF rail corridor, south of West "O" Street
- South 1st and "J" Street undercrossing.
- Salt Creek trail underpass at BNSF railroad, west of 1st and "J" Street.
- South 68th Street roadway overpass south of Wagon Train Road, south of Hickman
- ~~Firth Road, east of South 82nd Street~~ at BNSF rail corridor.
- Holdrege Street at 18th Street
- BNSF crossing "A" Street west of SW 56th Street

The consolidation of ~~tracks within a south~~railroad tracks along the southern portion of the community should be explored. A transportation corridor that also offers the potential of combining railroad activities ~~with the single corridor.~~ , including the BNSF facilities along Highway #2, would increase the safety and security of our growing community. **Future evaluation and use of railroad right-of-ways and tracks should consider light rail possibilities**.

AIRPORTS AND AIRFIELDS

The Lincoln ~~Municipal~~ Airport is the principal airport facility serving the Lincoln Metropolitan Area ~~and~~, Lancaster County, and a significant portion of the region in the southeast area of the State. It is operated by the Lincoln Airport Authority. This facility provides a wide range of services to this region and provides essential transportation links to national and international markets. The Airport is located in the northwest part of the City of Lincoln with surface access provided by Interstate and State highways. In the transportation planning process, the ground transportation issues were evaluated. The Plan will continue to provide for a high level of access to the Airport terminal and associated facilities.

The City of Lincoln's Airport Environs Noise District and Airport Zoning Regulations have been established to ensure the balance between the airport operations and the surrounding land uses. These regulations govern land uses and structural characteristics compatible with the airport's operations ~~and~~to minimize negative impacts on surrounding residents. ~~The Airport noise exposure and land use study on the compatibility of airport noise and land~~

uses was completed in September, 2003. This program allows measures to be undertaken to provide an improved noise compatibility program to reduce noise and non-compatible land uses.

and to protect the airspace around the airport. The Lincoln Airport Authority has assessed the existing and future noise impacts, and accordingly developed noise contours for the Airport environmentenvirons in a Part 150 Airport Noise CompatibleCompatibility Planning Study. The study was completed in September, 2003. This study proposed measures to reduce noise and non-compatible land uses. The Comprehensive Plan will use information from the Part 150 Study to guide land use planning throughout the airport environs.

Strategies: Assess the Existing and Future Noise Impacts

- The Lincoln Airport F.A.R. Part 150 Noise Compatibility Study, was completed in 2003 and is an approved Subarea Planpart of the Comprehensive Plan. Recommendations of the Study shouldmay be implemented over time.
- Maintain compatible land uses and zoning within the 60 DNL and 75 DNL noise contour line.

Future Considerations

The Lincoln Airport provides essential commercial air service for the region as well as a wide variety of general aviation services to the local community. As the City of Lincoln continues to grow to the north and west, it will ultimately surround the airport. To help protect and to keep the airspace around the airport safe, and secure, the Airport Zoning Regulations ordinance will become increasingly important. To ensure that future developments are aware of their proximity to the airport and the noise issues are appropriately addressed the Airport Environs Noise District ordinance and the recommendations of the Airport Noise Compatibility Study will become very important. In order to ensure that the future development and land uses are compatible with the existing airport and its functions, following the Airport West Subarea Plan will be necessary.

- The Airport West Subarea Plan was approved in 2005 and was amended into the 2025Comprehensive Plan. Elements of the Plan should be pursued for implementation over time.
- As a follow-on study to the Airport West Subarea Plan, additional transportation corridors around the airport, especially to the north, may be considered.
- Other future considerations include redevelopment of the Lincoln Airpark West for a variety of uses including the development of sites for rail accessible warehousing and the opportunities for air-rail-truck freight operations. While these potential developments can make the airport into an intermodal transportation hub, attention will need to be focused on mitigating conflicts between the different freight operations.
- Improving convenience of traffic circulation around the Airport would require implementation of a "loop" roadway.
- As the Airport continues to expand services to the area it may be necessary to provide mass transit from regional providers.
- As Airport services and amenities continue to expand, implementation of a strategic plan to improve access to and from the Airport will be necessary.
- As an integral part of the community the Airport needs to function as a major Transportation Hub.

AIRFIELDS

Smaller private airports and airfields are also located throughout the County. Airfields are limited by local ordinance to use by the residents of a single family home with not more than one plane. The PlanFederal Aviation

Administration encourages ~~a continued~~continuous monitoring of private air facilities and discourages the location of airfields ~~within~~in close proximity to homes, schools, and hospitals. The monitoring o~~r other~~f these facilities is not only to protect areas potentially sensitive to noise, but also to provide safety and security of air space around these private airports and airfields.

GOODS AND FREIGHT MOVEMENT

Air, rail and trucking are essential components in the local economy and play a key role in the Lincoln Metropolitan Area and Lancaster County transportation system. The Transportation Plan coordinates a multi-modal effort with and between the various modes and the street and highway component of the overall transportation system.

Air, rail and trucking industries are private entities outside the purview of the City of Lincoln and Lancaster County. Future transportation planning efforts ~~should decrease the barriers~~are to continue planning efforts that ~~prevent the integration of~~will further integrate freight interests into the transportation planning process.

The planning process ~~should do more~~will continue to encourage consideration of specific freight projects, including organizational and procedural issues.

Planning Policy Strategies

- Work with Nebraska Department of Roads to take a more pro-active role in analyzing freight flows and proposing specific freight improvement projects for inclusion in State Transportation Improvement Plan (STIP) and local Transportation Improvement Plan (TIP), especially freight projects of Statewide and national significance.
- Work with State and ~~MPO~~freight hauling community to examine freight flows and issues at the regional trade corridor or trade area scale.
- Build ~~E~~on current efforts to establish an MPO freight advisory task force. MPO should consider establishing a freight advisory committee with representatives from all appropriate modes to ensure that projects proposed by the private sector are incorporated into the planning and programming process.
- Institute a “short-range” freight transportation improvement program, listing only small projects that can be completed within 18 months, to narrow the gap between the public and private sector planning horizons.

As a component of the transportation system, freight and goods movement impacts land use. The level of impact intensifies around high traffic corridors and facilities such as rail lines, interstates and highways, airports, pipelines and freight destination areas (i.e., industrial, office and commercial centers). Planning for these elements in order to minimize negative impacts and maximize economy and efficiency requires long range planning.

Land Use Policy Strategies

- Continue the review of existing policies concerning distances (i.e., buffers) between conflicting land uses.
- Encourage the assessment of risk concerning hazardous materials and impact on land uses.
- Enhance access to the external transportation connectors (e.g., Interstate system) in order to minimize impact on existing land uses.
- Enhance the internal transportation routes (e.g. State highway and City arterials) in order minimize impact on existing land uses.

PLANNING DATA AND ANALYTICAL TOOLS STRATEGIES

THE DATA AND ANALYTICAL TOOLS TO CONDUCT EFFECTIVE LOCAL PLANNING ARE NOT READILY AVAILABLE TO MPOS.

THERE ARE SEVERAL WAYS TO ADDRESS THIS ISSUE:

- Coordinate the purchase of commodity flow data from private sources.
- Develop freight analytical and modeling tools.
- Revise and re-weight project evaluation criteria to give greater recognition of and emphasis to freight projects that advance local, State, regional, and national economic development and trade strategies.

INTER-MODAL AND MULTI-MODAL FREIGHT OPERATIONS

Multi-modal and inter-modal freight delivery is emerging as an efficient system of freight delivery and holds opportunities that are increasing. New concepts are also being developed where warehouse distribution, light manufacturing, and assembly facilities are being combined with inter-modal freight facilities. This is a new era for transportation where "inter-modalism" is changing freight delivery systems and Lincoln and Lancaster County residents continue to be reliant on rail-to-truck and truck-to-rail freight transfers arriving through the only inter-modal facilities in Nebraska located in Omaha.

The advantages of an inter-modal freight center located in Lincoln are that is in the geographic center of the nation which enables it to provide access to the major mid-western markets within a single day's drive. Lincoln is located at a crossroads of three U.S. highways and a major railroad line. Interstate 80 is the nation's only coast-to-coast Interstate system where truckload service is available anywhere in the country within three days. And all domestic destinations are accessible by railway within four days.

Future transportation planning efforts should work toward decreasing the barriers that prevent the development of new inter-modal freight terminals and the planning process should do more to encourage and support the development of individual inter-modal projects by private industry.

Planning Policy Strategies

- Encourage potential individual inter-modal freight providers, the railway companies, and other public and private entities in a more pro-active role for the development of an inter-modal distribution center.
- Work together with State, County, City, Airport Authority and other public organizations in developing suitable ground access to proposed inter-modal facilities